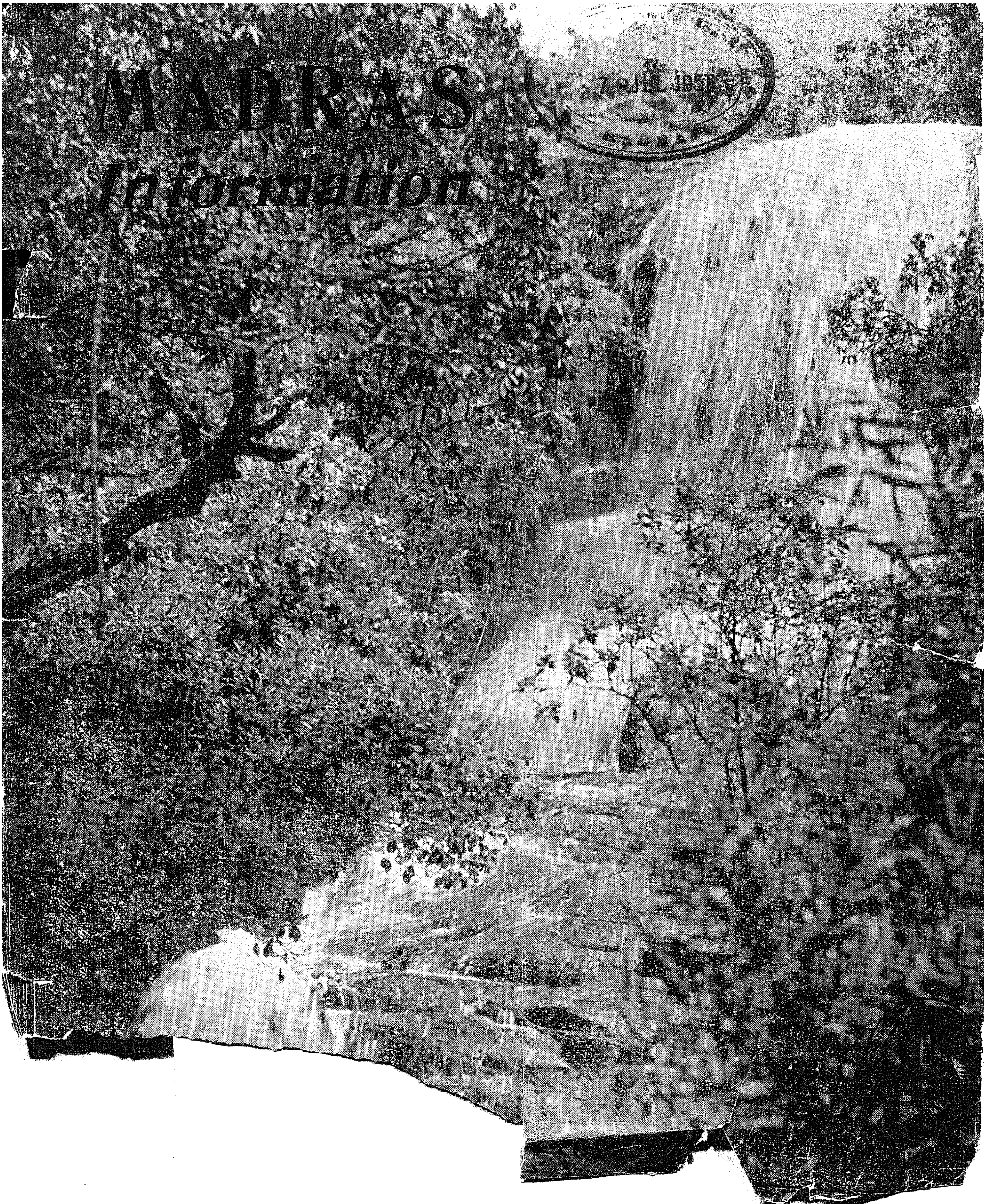
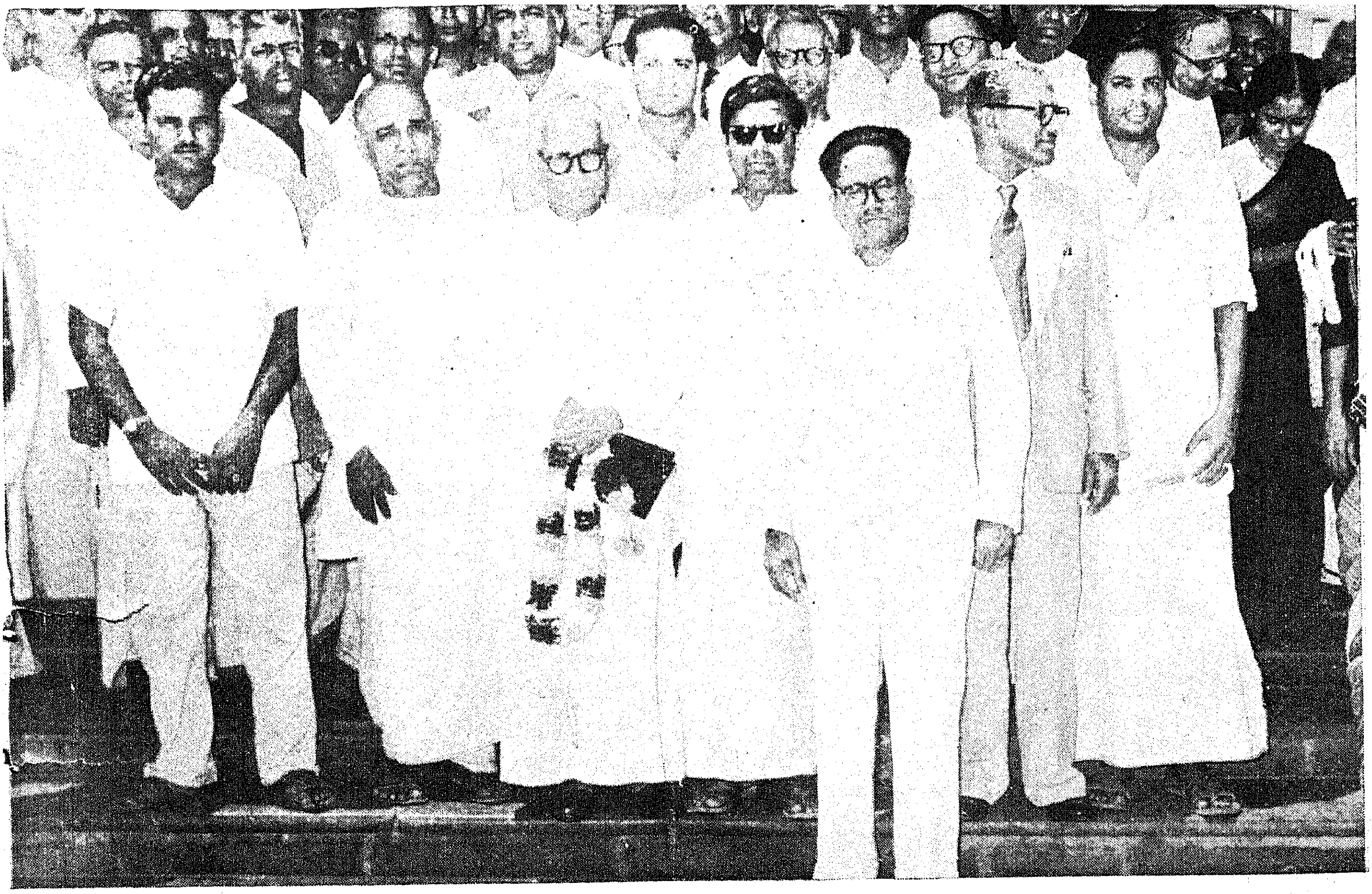
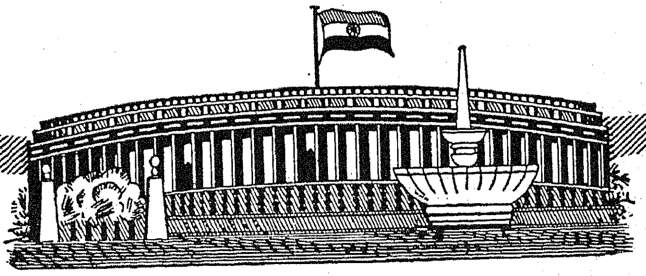
MADRAS
Information

7 JUL 195





A large gathering of friends and admirers saw Sri Bhaktavatsalam, Minister for Agriculture and Labour, off at Meenambakkam Aerodrome on the 1st June when he left for Bombay on his way to Geneva to attend the Conference of the International Labour Organisation.



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Madras Information

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7 - JUL 1956

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Cover Page : Bearshola Falls, Kodaikanal.

The first Irrigation Scheme under Second Plan

...nkara Project was originally ... in 1912 as a part of the ...engode Project and again, in ...29. The scheme was finally ...ing unremunerative. Food ...nd economic distress in the ...rced the hands of the Govern- ... consider the scheme in 1947 ...h other schemes. Investiga- ... taken up and completed in ...t the scheme was not taken ...eference had to be given to ...chemes like Malampuzha, ... and Walayar. However, ...e was considered in connec- ... the S...cond Five-Year Plan ...as accordingly sanctioned.

...leenkara River coming down ...hills south-east of Kollengode ... boundary between Pollachi ...at taluks for a distance of ... miles up to Govindapuram ...mada amsam, where it enters ...hat taluk. About 3/4 mile ... Govindapuram road bridge ... Pollachi-Kollengode road a ...y called Papathipallam from ...atore district joins the main ... The river after its confluence runs in a westerly direction for about 1½ miles and meets a steep rising hillock with exposed hard rock on the right side. It is proposed to construct the Meenkara Dam at this point and we have all assembled here just in rear of the alignment of the dam. About 1½ miles below the dam site there is a private masonry anicut called "Kallukettya Challa Anicut, irrigating about 100 acres on the right side. About a mile below this anicut a steam called "Chulliar" from Kollengode hills joins the main river. About 1 mile further down there is another private masonry anicut called 'Puliyanthoni Anicut' irrigating about 200 acres. Below this anicut the river is called Gayathiri River. After passing through Kollengode and Alathur, the river ultimately falls into the Bharathapuzha in Travancore-Cochin State limits near Lakidi Railway Station. The total length of the river from its origin up to its infall into the Gayathiri river is about 45 miles of which the tail reach of about 7 miles lies in Travancore-Cochin State limits.

The Meenkara Reservoir Project as now envisaged consists of a storage reservoir of 315 m.c.ft. capacity across the Meenkara River near the hamlet of Mulapudur in Muthalamada village opposite to 21/6 mile of Pollachi-Kollengode road, the nearest railway station being Muthalamada. At the site there is good sheet rock rising almost vertically on the right margin of the river. In the bed of the river also, hard rock is exposed for a good length. This site is the best available in the locality. The Palghat-Pollachi Railway line is very near the site in question and the level of this line is the limiting factor in fixing the F.R.L. Hence the F.R.L. and the capacity have been fixed as 509·0 and 315 m.c.ft. respectively. The dam will be 3,160 feet long, out of which 2,860 feet will be in earth and the balance 300 feet in masonry. In the masonry portion there will be a spillway section within the river bed 89 feet long. The storage capacity as now fixed is 315 m.c.ft. which will be obtained by installing gates 15 feet high over the crest of the spillway section.

Two canals will take off for irrigating the ayacut proposed, one from the left of the reservoir direct and the other from above the existing Puliyanthoni Anicut 3½ miles below the dam. The right side canal which is 5½ miles long will irrigate 3,110 acres and the left side canal 3¾ miles long will irrigate 990 acres. Of the total ayacut of 4,110 acres, 1,867 acres will be double crop wet lands, 1,428 acres single crop which will be converted into double crop wet and the remaining extent being dry lands on which two crops will be raised by the Project water. The project is expected to yield an extra of 1,025 tons of rice annually. In favourable years a third crop can be raised on an area of 500 acres.

The total cost of the project is Rs. 49·56 lakhs including all charges. The project is programmed to be completed in two working seasons and with the ryots' co-operation it will be possible to reap the full benefits of the scheme immediately thereafter.

Salient Features

...ge area of the river at the dam site ..	35 square miles.
...aximum flood discharge	16,050 cusecs.
Full Reservoir Level	+ 509.
Maximum Water Level	+ 509.
Top of Dam	+ 517.
Length of Dam — Masonry	300 feet.
Length of Dam — Earth	2,860 feet.
Average bed level of the deep river course ..	+ 463·2.
...rest of Spillway	+ 494.
...ea submerged by the Reservoir at F.R.L.	477.
...eservoir capacity	315 m.c.ft.
River and left side canal sluices	1 No. 5′×6′ with Sill at 473·25.
Right side canal sluice taking off at Pulianthoni anicut.	2 Nos. 5′×2½′ with Sill 374·0.
Length of left side canal	3¾ miles.
Length of right side canal	5½ miles.
Area benefited	4,100 acres.
Cost of the Project	49·56 lakhs.

Brightening up the villages

Madras Leads in Rural Electrification

Sri V. P. APPADURAI, Chief Engineer (Electricity)

Rural Electrification has two primary objectives; one to improve the economic status of the rural population by increasing the productivity of human and animal labour and the other to promote rural welfare by providing an environment equal in comfort and convenience to that enjoyed by the urban population. Thus rural electrification can be a powerful factor in preventing the exodus of the rural population to urban areas where higher wages and greater amenities exist.

The present Madras State has an area of 60,362 square miles and comprises 19,491 villages and 293 towns. Of a total population of 35·735 millions, 78 per cent, i.e., 27·90 millions live in villages. To Madras, just as for the rest of India, Rural Electrification has therefore a special significance as it offers the solution for increasing food production, bringing more employment to the Rural population, providing various amenities for healthy and happy living and thus arising their standard of living.

The Electricity Department of Madras since its very inception in 1927 has, as its main objective, the development of the available power resources of the State with power stations located at various places, transmission lines linking the power stations, sub-stations located at load centres, and a net-work of transmission lines, forming the power grid for distributing cheap electric power for industrial, agricultural and domestic purposes throughout the length and breadth of the State. There are now four hydro electric power stations and two thermal (steam) power stations in the grid with a total installed capacity of 256·5 Mega Watts.

The grid comprises about 12,000 miles of transmission and distribution lines of which transmission lines from 50 per cent.

Progress of Rural Electrification in the State

The Government of Madras have been attaching considerable importance to rural electrification in the past and Madras leads the rest of the States in the matter of number of villages electrified. There are at present about 3,221 villages electrified to the end of 1955–56, i.e., 16·50 per cent of the villages in the State have been electrified so far. With the Government of India loan of Rs. 300 crores for the years 1954–56, large scale programme of rural electrification has been possible and 829 villages have been connected to electric supply during the year 1955–56.

Out of 561,107 villages and towns in the Indian Union only 5,552 have been electrified by the end of 1954, i.e., only 0·99 per cent of the villages and towns were electrified by 1954.

The growth of the rural electrical development in the Madras State may be seen from the following figures :—

Year.	*Number of villages electrified.*
Up to 1935–36	30
,, 1940–41	740
,, 1945–46	804
,, 1950–51	1,613
,, 1951–52	1,820
,, 1952–53	1,981
,, 1953–54	2,187
,, 1954–55	2,392
,, 1955–56	3,221 (approximately).

In the matter of Rural Electrification Madras definitely leads the rest of the States in India. Madras accounts for nearly 50 per cent of all villages electrified in India, and Mysore comes next in rank with 649 villages electrified by 1954 as may be seen from the following figures as on 31st December 1954 :—

States.	*Number of villages electrified having population below 10,000.*	*Number of small towns electrified having population between 10,001–20,000.*
Assam	10	
Andhra	295	
Bombay	261	
Bihar	96	
Madras	2,131	
Madhya Pradesh	48	
Orissa	21	
Punjab	210	
Uttar Pradesh	472	
West Bengal	70	
Hyderabad	3	
Mysore	649	
Madhya Bharat	20	
Pepsu	9	
Rajasthan	42	
Saurashtra	24	
Travancore-Cochin.	345	
Ajmer	3	

States.	Number of villages electrified having population below 10,000.	Number of small towns electrified having population between 10,001–20,000.
Bhopal	..	..
Coorg	..	1
Delhi	6	1
Himachal Pradesh.	7	..
Kutch	2	1
Manipur	..	..
Vindhya Pradesh ..	3	3
Tripura	..	..
Andaman and Nicobar Island.	3	..
Jammu and Kashmir.	3	4
Total ..	4,733	288

The table shows that Madras is far ahead of most of the other Indian States but she has still a lot more to achieve. It is proposed to electrify on an average about 500 villages per year during the Second Plan Period (1956–61).

It is estimated that over a 150 millions units have been consumed ~ the villages in 1954–55 forming bout 20 per cent of the consumption n the State. The rural connected load, forms over 25 per cent of the otal connected load on the grid.

Electricity in Agriculture

Electricity is used in villages chiefly for pumping water for agriculture (i.e.), nearly 70 per cent of the power consumed in villages. This forms 14 per -nt of the total consumption in the ate. There are at present nearly 3)00 pumpsets in the State using er from the grid. The increased of electricity for pumpsets can be 29 ed from the following table which the number of pumpsets con- ed.

Year.	Number of pumpsets connected at the end of the year.
1935–36	269
1940–41	2,589
1945–46	5,435
1950–51	14,626
1951–52	17,879
1952–53	19,799
1953–54	21,733
1954–55	24,654
1955–56	33,000 (approximate).

The demand for power for agricultural pumpsets is phenomenal in this State, there being more than 20,000 applications on hand for this type of load. It is proposed to connect up on an average of about 6,000 pumpsets per annum during the Second Plan period.

In the matter of electricity for irrigation, Madras ranks first in number of consumers, connected load units consumed and *per capita* consumption as can be seen from the Statement A on page 6. (Figures as on 31st December 1954.)

The following figures regarding the use of electricity in agriculture may be interesting. The average unit capacity of a pump in the Madras State is 6 h.p. This can irrigate 7 acres of land producing about 3½ tons of foodgrains in a year. The lift of the pump varies considerably depending on the water table level at the location say, from 10 to 110 feet. The average consumption of power for irrigation of 1 acre of land is 800 units costing nearly Rs. 40 a year.

With a view to encouraging the use of electricity in agriculture, the Government offer electricity at very cheap rates, *viz.*, 0·90 anna per unit, for the first 500 units per installed horse power per annum and 0·75 anna per unit for all in excess. There is an annual minimum guarantee of Rs. 6 per horse power connected, but, this annual minimum guarantee will be reduced proportionately to the number of days in which the well could not be used due to drought, provided the consumer sends due intimation of the fact as soon as the well becomes dry.

It may particularly be noted that no power cut was imposed on agricultural consumers during the acute water shortage in 1953 summer, when power cuts had to be introduced on all industries and domestic consumers. They are generally considered as essential consumers. New connections for agricultural purposes are treated on a priority basis. Based on representation made by agriculturists in drought affected areas, the Government have also very recently announced certain concessions to agricultural consumers in respect of collection of security deposit.

Processing Industries

Other uses to which electricity is put into in the rural areas besides lighting are processing industries of the locally grown agricultural products. Rice hulling, groundnut decorticating, oil pressing, sugarcane crushing, cotton ginning, tape weaving, etc., are some of the rural processing industries and at present about 3,000 such industries with a connected load of 33,000 K.W. are run on power in this State.

The approximate power requirements and output of some of these industries are given in the table on page 6 (Statement B.)

It has often been found economical by consumers to use a single motor to drive a number of different machines by means of a shaft with fast and loose pulleys as each of the machine has to run only for a limited number of hours in a day.

Power looms

Next to agriculture, handloom industry in India is the most important. Despite the strenous competition from the large textile mills producing cheap cloth the handloom industry has held its own and in the overall interests of the rural populations, it is essential that this industry receives adequate support. This industry gives a subsidiary occupation to the agriculturist during periods when there is little or no cultivation work.

The output and wages in the handloom industry are however so very poor that this can be considered only as an alternative to unemployment. But by adopting small power looms, the output will increase several times with corresponding increase in wages.

A $\frac{1}{3}$ H.P. motor is adequate to drive one loom and often one operator can look after two looms. In one working day of 8 hours a powerloom can weave two sarees each of 9 yards by 45 inches, while with the handloom it would take 2 to $2\frac{1}{2}$ working days for making one such saree. The power required for one loom being very small, the energy charges are a small fraction of the working costs, but since the worker is able to obtain larger output with the power-driven loom, he is able to earn a reasonably good remuneration.

The figures in Statement C on page 6 give a typical comparison of the two types of looms on the assumption that they are operated for an equal number of days per year.

The use of a powerloom enables the workers to earn a large wage and the consumer to obtain cloth at a cheaper price.

Despite the attractive economy of the powerloom, there has not been much development of this type of load for the reason that the average handloom weaver is too poor to find the capital for the powerloom.

It is very interesting to note the recommendations of the Kanungo Textile Enquiry Committee which was appointed by the Government of India in 1952 to enquire into the textile industry. The Committee after examining 58 individuals and bodies and visiting 68 centres of textile industry have recommended a phased programme of the conversion of 12 lakhs of active handlooms into semi automatic looms or powerlooms to make the handloom technically more efficient. Under this programme 3 lakhs handlooms should be converted into 2·13 lakhs of improved handlooms and powerlooms over a period of six years and the conversion of the remaining looms should be carried out in two or three five-year periods so that in 15 or 20 years' time the entire industry will have been converted into decentralised improved handloom or decentralised domestic powerloom industry.

It is reported by the Committee that the handloom exports in 1953 totalled only 62·8 million yards out of a total export of 696·4 million yards. They were very pessimistic about the increase in the export in the coming years unless the economic and technical efficiency of this industry increased which can only be achieved by the conversion to powerlooms as indicated above. It is further reported by the Committee that with the cottage powerloom unit the weaver produces per unit of time about four times as much cloth as the handloom weaver and therefore earns a better total wage than the handloom weaver.

The Committee recommended the establishment of special agency to deal with the planning, and execution of the financing of the conversion of the handloom industry by stages into the improved handloom and powerloom industries.

Cottage Industries

The importance of the use of electricity in cottage industries in the matter of giving employment to the agricultural population during off-season periods is slowly being recognised. It is roughly estimated that for more than one-third of the year the cultivators are idle. Further if improved methods of agriculture are introduced other occupations will have to be found out for a large number of cultivators who may become surplus man-power on the farm. A variety of cottage industries have therefore been adopted to work on electricity, viz., silk throwing, knitting, machine carding for woollen drugget industry, tap weaving, button making, fountain pen making, etc.

The power requirements of these industries are given below :—

1. Silk throwing, $\frac{1}{2}$ H.P.—3 H.P.
2. Single unit powerloom, $\frac{1}{2}$ H.P.—3 H.P.
3. Knitting machines, $\frac{1}{3}$ H.P.—3 H.P.
4. Carding for woollen drugget industry, 3 H.P.
5. Tape weaving, $\frac{3}{4}$ H.P.
6. Button making, $\frac{1}{2}$ H.P.
7. Fountain pen making, $\frac{1}{4}$ H.P.

These industries are operating on a small scale in the districts of Salem, Ramanathapuram, Madurai, Chingleput and Coimbatore of Madras State. The main reason for their being not so popular as they may be expected to be, appears to be the lack of capital with the rural population for purchasing the machinery.

To encourage cottage industries, the Electricity Department is offering power at the same cheap rate as for agricultural pumping. It is hoped that, with the introduction of the cheap electric power and the introduction of improved machinery required for the cottage industries with the necessary financial and technical assistance, the cottage industries will get a considerable fillip in the coming years. It is interesting to note that the Planning Commission is attaching great importance for these household and small industries in the draft recommendations for the formulation of the Second Plan. They consider that this would be the principal method of liquidating unemployment and also of creating a marketable surplus of consumer goods to meet the increase in demand arising from investments on heavy industries, construction work and expenditure on social work. Accordingly they have provided a sum of Rs. 40 crores per year or Rs. 200 crores for the Plan period. This forms about $14\frac{1}{2}$ per cent of the allocation of investment by way of industries.

A method of popularising the agricultural processing and rural industries will be by way of demonstration centres which will demonstrate the use of mechanized equipment of the types and sizes which can be conveniently adopted for the requirements of these industries. The object of these centres is to enable the rural worker to increase his production by the use of mechanized equipment and thus increase his earnings. Equipment of appropriate size is to be selected so as to ensure the overall cost of operation including the annual charges resulting in reducing the cost of production.

Sometimes the operations of farmers are in too small a scale to enable economical use of machines. They may not be able to own individually such costly equipments for the mechanization of the industry. In such cases the adoption of " Community facilities " on co-operative basis enables the rural population to derive the benefits of mechanized process.

Demonstration centres may be built up for individual industries such as the following :—

(*a*) Powerlooms.
(*b*) Pottery.
(*c*) Metal work.
(*d*) Cutlery.
(*e*) Button making.
(*f*) Shoe making.
(*g*) Tailoring.

These centres can be located at different places where there are concentration of rural peasants operating the respective industries. As soon as an experimental centre of each type operates successfully more centres on operational basis can be established.

Conclusion

Even though the Madras State leads the rest in the matter of rural electrification she has a lot more to achieve as only about 18 per cent of the villages have so far been electrified. The ambition of the State is to electrify every village within a short period. Towards this goal, it is proposed to electrify a minimum of 500 villages every year commencing from the Second Plan period.

The availability of electric supply in rural areas is not only a help to increase the agricultural output but is of considerable social importance.

The availability of electric light and running water with modern sanitation narrows the margin between the amenities of urban and rural houses. This should reduce the apparent comparative glamour of city life which is a contributing factor to the population drift from country side. With the supply of electricity the rural area becomes a bright centre of social life with more possibilities of cheerful living. The spread of electricity will raise the standard of living of the common man and bring brightness and happiness to every home.

STATEMENT A.

Serial number and name of State.	*Total number of consumers for agricultural supply.*	*Connected load in KW under irrigation.*	*Units sold in millions for irrigation.*	*Per capita consumption for irrigation.*
1 Madras	22,555	94,716	101·129	2·77
2 Mysore	5,360	16,100	12·940	1·43
3 Andhra	2,359	8,444	7·266	0·36
4 Bombay	1,305	6,172	5·281	0·15
5 Uttar Pradesh ..	959	37,280	74·049	1·17
6 Travancore-Cochin ..	828	12,502	11·291	1·22
7 Rajasthan	654	3,350	1·798	0·12
8 Madya Pradesh ..	615	1,400	0·824	0·04
9 Punjab	361	2,120	0·141	0·01
10 Bihar	333	3,731	6·225	0·15
Total for India ..	36,012	192,569	231·373	0·64

STATEMENT B.

Description.	*H.P. of motor.*	*Output (in lb. per hour).*	*Consumption of electricity in KWH per 100 lb.*
1 Rice huller and polisher (big).	25	2,400	0·8 to 1·0
2 Cotton ginning (double roller type).	4 to 5	78	2·75 to 3·0
3 Groundnut decorticator.	25	7,500 lb. of shelled groundnut.	·025
4 Flour mill (for rice, ragi, cholam and wheat).	5 to 7·5	180 lb. of flour.	1·2 to 1·5
5 Oil processing (Pinto oil process for gingelly, cocoanut, castor and groundnut seeds).	3	15 lb. of oil and cakes for cattle fodder (for gingelly).	5·0
6 Sugarcane crushing ..	3	1,000	0·25

STATEMENT C.

	Handloom.	*Power-loom.*
	RS.	RS.
Capital cost per loom	400	6,000
Interest and depreciation	20	600
Operation and maintenance	30	200
Wages for the operator	750	565
Energy charges for 280 days of 8 hours/day at 1 anna per unit.	...	63
Overheads	50	150
	850	1,578
Number of sarees (9 yards by 45 inches) made per annum per loom.	125	400
	RS.	RS.
Cost of production per saree	6·8	3·9

Large Cattle Population of India

The total cattle population in India in 1952–53 stood at 155,099,000 out of which 49,848,000 were cows and 21,842,000 buffaloes yielding about 510,000,000 maunds of milk per year.

India produced 117·27 lakh maunds of ghee and 20·35 lakh maunds of butter in 1951. Nearly 1,407,200,000 eggs were produced during that period.

During 1951, there were 31,779,538 wooden ploughs, 931,110 iron ploughs and 9,863,111 carts in use in the country. Power driven sugarcane crushers numbered 21,228 as against 519,509 crushers operated by bullocks. Oil engines and electric pumps used for agricultural purposes were 95,140 and 29,834 respectively. The total number of tractors in use for agricultural operation was 8,354.

Rural Electrification

New villages electrified during April 1956

	Village.	Taluk.	District.
	Pykara Electricity System.		
1	Poravipalayam	Pollachi	Coimbatore
2	Palaya Unjapalayam	Avanashi	Do.
3	Pudu Unjapalayam	Do.	Do.
4	Alampalayam	Do.	Do.
5	Rakkiapatti	Palladam	Do.
6	Rangasamudram	Coimbatore	Do.
7	Kaliannanpudur	Do.	Do.
8	Komarapalayam	Gobichettipalayam	Do.
9	Ammapatti	Udumalpet	Do.
10	Vellanadhi	Periakulam	Madurai.
11	Siviarpalayam	Gobichettipalayam	Coimbatore.
	Mettur Electricity System.		
1	Hyderpuram	Gudiyattam	North Arcot.
2	Arjunapuram	Do.	Do.
3	Gopanpatti	Do.	Do.
4	Venkatapuram (Pakkam)	Do.	Do.
5	Kavanoor	Do.	Do.
6	Pavalathorai	Do.	Do.
7	Kalpoondi	Tiruvannamalai	Do.
8	Nedumpalli	Arkonam	Do.
9	Kilravandavadi	Chengam	Do.
10	Kanniyanoor	Wallajah	Do.
11	Kilpadi	Do.	Do.
12	Sengadu	Cheyyar	Do.
13	Zamin Kuldigai	Vellore	Do.
14	Ponnan Thangal	Polur	Do.
15	Gingee	Gingee	South Arcot.
16	Sankarapuram	Do.	Do.
17	Sirukadambur	Do.	Do.
18	Goddam	Gudiyattam	North Arcot.
19	Madavalam	Tiruppattur	Do.
20	Madapalli	Do.	Do.
21	Sellandampalli	Do.	Do.
22	Krishnapuram	Gingee	South Arcot.
23	Thoppur	Omalur	Salem.
24	Denkanikottai	Hosur	Do.
25	Thoppapatti	Rasipuram	Do.
26	Ponparappipatti	Do.	Do.
27	Ramayeepatti	Do.	Do.
28	Perivanavasi	Omalur	Do.
29	Kelamangalam	Hosur	Do.
30	Viraponty	Salem	Do.
31	Thoppapatty	Rasipuram	Do.
	Papanasam Electricity System.		
1	Suthamalli	Tirunelveli	Tirunelveli
2	Venkatachalapuram	Sattur	Ramanathapuram.
3	Valavallan	Srivaikuntam	Tirunelveli.
4	Siruthondanallur	Do.	Do.
5	Thirayanvila	Nanguneri	Do.
6	Idayangudi	Do.	Do.
7	Battarpuram, hamlet of Eruppuvari.	Do.	Do.

(*Continued on page* 11)

Workshops for Carpentry and Blacksmithy

The Government have sanctioned a scheme for the establishment of two model combined workshops for carpentry and blacksmithy with mobile units attached to each, one at Tirunelveli and the other at Kozhikode.

Sanction has been accorded to the training of 15 artisans in the carpentry section and 20 artisans in the blacksmithy section for a period of one year and the payment of a stipend of Rs. 30 per mensem to each artisan.

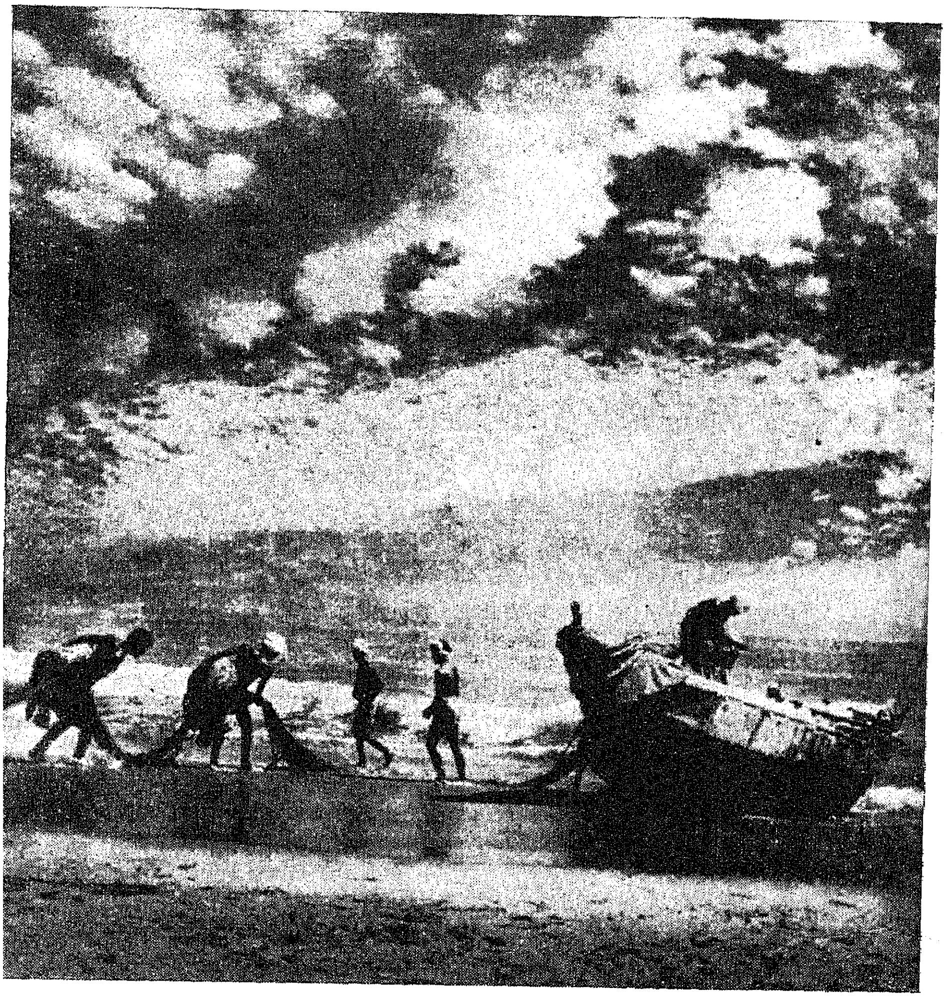
Since the workshops will not be able to cover more than a restricted area, a mobile unit equipped with improved modern carpentry and smithy tools will be attached to each workshop. The mobile workshops will visit and stay in each village for a few days, teach the village craftsmen the method of using the improved tools and equipments and where necessary, supply them with improved tools and appliances on easy terms. They will again visit the villages after two or three months, to see whether the craftsmen are correctly following the improved technique.

A warning

It has been brought to the notice of the Government that some private persons styling themselves to be firms of Industrial Engineers and Experts have used the name of Director, Small Scale Industries and advertised in the dailies asking the applicants desirous of securing loans from Government or seeking information to remit a sum of Rs. 7–8–0 along with such application.

The public are hereby informed that the said advertisement was not issued by any officer of the Government. All applications for State Aid or other particulars for loan, etc., to small scale and cottage industrialists are obtainable *free of cost* directly from the office of the Director of Industries and Commerce, Chepauk, Madras-5, or the office of the Assistant Director of Industries and Commerce in each district. Similarly for obtaining any technical help or advice from the Government, Department of Industries and Commerce, no fee is payable. Such of those who make payments to private firms, individuals, institutions, etc., in the hope of getting aid from Government will do so at their own risk.

12 Crores-Scheme for the Development of Fisheries



Fishermen on the Coromandel Coast.

Tens of thousands of intrepid fisher-
nen in hundreds of villages strung out along the 3,500-mile-long seacoast of India make their living by catching and selling sea fish. In villages spread out along the banks of numerous rivers, lakes and ponds in the country thousands more make a living by catching fresh-water fish.

Much progress has been made towards greater production both of fresh-water fish and of sea fish through the initiative of the Central and State Governments and from the technical and other assistance received from the Indo-U.S. Technical Programme and the Indo-Norwegian Fisheries Community Development Programme.

As against Rs. 5 crores allocated in the First Five-Year Plan, the Second Plan has earmarked a total outlay of about Rs. 12 crores for the development of fisheries—Rs. 4 crores on the part of the Ministry of Food and Agriculture and about Rs. 8 crores in the plans of States.

While statistics of fish production are still far from adequate, it is estimated that at the beginning of the First Five-Year Plan the total production was about a million metric tons, of which about 20 per cent was held by fishermen for domestic use and the balance represented sea fish and the marketable surplus of inland fish. During the First Plan, fish production increased by about 10 per cent, the production in 1955-56 being about 1·1 million metric tons. It is expected that during the Second Plan, fish production will rise by about 33 per cent, i.e., 1·4 million metric tons.

The development of inland fisheries was begun on a small scale even before the First Five-Year Plan but has since been intensified.

Greater part of the programme of fisheries development, however, relates necessarily to marine fisheries. And the tasks to be undertaken fall broadly under four categories: first, improvement of fishing methods; second, development of deep-sea fishing; third, the provision of fishing harbours, and lastly, the organisation of fish transport, storage, marketing and utilisation.

Eggs for hatching of the following breeds of poultry are available for sale at the Agricultural College Dairy, Coimbatore.

1. White Leghorn ..		Rs. 3 per dozen.
2. Rhode Island Red.		
3. Black Minorca ..		
4. Light Sussex		
5. Australorps ..		Rs. 9 per dozen.
6. Anconas		
7. Barred Plymouth Rock.		
8. Black Leghorn ..		
9. New Hampshire ..		
10. White Wyandotes		

Sales Tax, Packing and Railway freight extra. Payment to be made in advance.

Educative Value of Exhibitions

The story of Agricultural progress told in Photos and Charts

The educative value of exhibitions cannot be over emphasised. At the present day, it is one of the most powerful medium for educating the vast masses in this country in regard to any new innovation. Exhibition, being an assemblage of concrete things, makes a deeper impression on the common man. Recently, the story of agricultural progress of this country was told with the help of photographs, charts and models in the Pushkaram Exhibition at Rajahmundry.

Foodgrain production which was 54 million tons in 1950–51, has been stepped up to 65 million tons by the programmes of the First Five-Year Plan and the target for the Second Plan is 75 million tons. Cotton production, likewise, has risen from 2·9 million bales in 1950–51 to 4·2 million bales with the First Five-Year Plan and the target for the Second Plan is 5·5 million bales. Oil seeds production, standing at 5·5 million tons at the conclusion of the First Plan, has the target of 7 million tons in the Second Plan. All these facts have been brought out in a manner easily intelligible to the masses at the People's Plan Stall.

Two other features in the Section which grip the attention of the crowds are the models illustrating the Japanese method of paddy cultivation and soil conservation methods. Both models are instructional and give clear details of the operations. In the first model, the agriculturist is shown how to prepare the field, handle manuring and sowing and finally transplant the seedlings. In the second, two three dimensional models, side by side, show the same area ruined by soil erosion and made fertile again by various conservation techniques like afforestation, terracing, contour bunding and strip cropping.

Visitors studying the technique of Japanese method of paddy cultivation at the People's Plan Stall at an Exhibition.

The Exhibition has also enabled the people to realise that the total area under irrigation in India, which was 50 million acres in 1950–51 has been stepped up to 67 million by the First Five-Year Plan, while the Second Plan target is 88 million acres. The production of electricity stood at 2·3 million KW in 1950–51 and the programmes of the First Plan have stepped it up to 3·4 million KW. A hundred per cent increase is envisaged in the Second Five-Year Plan as the target is 6·8 million KW.

Photographs of Lower Bhavani, Tungabhadra, Tilaiya, Papanasam, Hirakud, Mayurakshi and other projects and three dimensional models of the Bhakra Dam, the Tungabhadra project and the Bokaro Thermal Power Station further reinforce the impact of the magnitude of the programmes on the masses.

The total balance in the Post Office Savings Bank Accounts in India stood at 256·5 crores in 1955 as compared with 185·1 crores in 1951.

Radio brings News of the World to the Village

Community listening for Entertainment and Education

SRI M. N. PARTHASARATHY, Radio Engineer, Madras

The sylvan surroundings of the village of Komarapalayam on the banks of the river Cauvery was in the year 1938, the scene of the beginning of a silent yet fascinating revolution—a revolution which has brought about a remarkable change in the economic and social structure of the rural areas of our State. That was the occasion of the introduction of prohibition, as an experimental measure in the first instance, in the District of Salem by the first popular Ministry, under Sri C. Rajagopalachari. That was the occasion, when the ex-addict pining for his favourite beverage was allocated to a place where there was free musical entertainment for him. That was the first Community Radio Receiver installed by the Government to provide a counter attraction to the ex-addict. He who first came in curiosity remained to listen. The educative and entertainment value of the programmes broadcast was not lost upon him. He became a regular listener. Listening to Community Broadcasts became a part of the daily routine of the people of the village.

The State Broadcasting Department was created in 1938 to install and maintain Community Receivers in the prohibition districts. The first hundred receivers installed in the villages at Government expense proved so popular that pressing demands for similar installations were received from hundreds of other villages of both prohibition and non-prohibition areas. The finances of the Government would not permit such large scale free installations. Government therefore, decided to install sets only if contributions were received from village Panchayats. Payment of full cost of the receivers and cost of maintenance would not deter the villagers from approaching the Government for installation of Community Receivers. The demand from the public was steadily increasing.

The Department purchased in bulk quantities domestic type of commercial receivers from the open market. They were suitably modified so as to make them as fool-proof as possible. The tuning of the receiver was arrested to the operating frequency of the regional transmitter. The loudspeaker inside the receiver was removed and housed in a separate cabinet or aluminium horn with an extension cable of five yards, so that the receiver might be kept safely inside a room, and the loudspeaker alone kept outside in the open place in order to enable the listeners to assemble and listen comfortably.

The installation of Community receivers on a large scale left on the Government the responsibility of maintaining them also properly so that all the receivers work continuously without breakdown. In order to maintain efficiently these sets, departmental service stations were established in the heart of each district. Every service station is in the charge of a Radio Supervisor. He has a battery charging plant and test equipment and tools to attend to minor defects in receivers either on the spot or at his headquarters.

Periodically once in 15 days or 22 days depending upon the battery drain of the set, he will send through his peon charged batteries to centres in replacement of discharged batteries at the centres which will be collected back by the peon to the service station for charging.

In addition, whenever a breakdown of a receiver is intimated to him by the centre, the Supervisor rushes to the place, services the receiver and restores it to proper working condition. In case he is unable to restore the receiver within a day or two, he installs at the centre a standby receiver which will work till the original set is serviced completely and reinstalled at the centre. All these efforts are taken to see that every centre gets unbroken community-listening facilities.

The jurisdiction of a Supervisor is determined by the density of sets in the area. A number of such Supervisors is put under the control of an Assistant Radio Engineer. The Assistant Radio Engineer has adequate facilities for attending to all types of the major repairs of radio receivers and any receiver received by him from a Supervisor for major servicing is serviced, restored to proper working order and returned to the Supervisor for re-installation at the centre.

It is the Primary duty of the Assistant Radio Engineer to see that the Radio Supervisor does his work properly and provides continuous unbroken service at the village.

In the course of time, it was found uneconomical to install in the villages the commercial type of receivers selling in the market. A Community receiver specially suited for the needs of the villages in Madras was designed and developed by the State Broadcasting Department after continuous research and experimentation. These receivers were assembled in the Laboratory and workshop of the department and sent out for installation in the villages. It was possible to economise considerably on the cost of installation by this means. Where villages were not electrified, sets operated by six volt storage battery were installed. Field

service stations were opened, depending on the concentration of the sets, to attend to the periodical charging of the batteries and also to the servicing of the receivers when they become defective in the course of their working. The aim was to see that even the remotest and most inaccessible of places were provided with community radio receivers as they are the places which require them most. No labour or expenditure is spared in maintaining the community receivers even in such places as remote islands in the Arabian sea, a hundred miles off the mainland or in the higher altitudes of the Nilgiris and Kodaikanal which can be reached only by walking as long as 15 miles.

In order to make the villager have an abiding interest in the set installed in his village and also to lessen the financial burden on the State, it was decided to make the villager share along with the State the cost of installation and maintenance of the sets. He has to pay in full the initial cost of installation and a portion of the annual expenditure on the maintenance of the set. Perhaps, Madras is the only State in India which is imposing this financial burden on the village listener. Yet, this is the State which has the largest number of community receivers in India. There are nearly 2,400 such receivers in this State today. It has now been felt that still greater facilities should be provided for community listening and the Government of India have volunteered to subsidise to the extent of 50 per cent of the cost of installation of community receivers.

The Government of Madras decided to avail themselves of the subsidy offered by the Government of India and so ordered that the new specifications laid down for the Community receivers should be accepted and that 800 receivers according to these specifications should be manufactured in 1955-56. Accordingly the State Broadcasting Department gave up the type design of sets which had till then been manufactured and evolved designs for three types of sets satisfying the specifications of the Government of India. Three sample sets were sent to National Physical Laboratory of India for test and approval and all the three types have been approved by them.

It had been proposed to manufacture during the Second Five Year Plan 3,200 sets every year, 2,000 for installation in this State and 1,200 for supply to the Government of India. It would, however, appear that the Government of India have declined to offer the subsidy and also gone back over their offer to take 1,200 sets per year manufactured by the Department. On account of these factors, The State Government have since decided that the State Broadcasting Department should manufacture 800 receivers for 1956-57 and that the future policy in regard to it would be reviewed and decided at the end of the year.

Under the Second Five Year plan a proposal has been made to introduce radio relay or redifusion services in a few towns. Wire Broadcasting installations are in operation in a number of Municipal towns. At these places, loud speaker connections can be given to private consumers and nominal hire charges collected. Such a system is very widely in use in Europe and United Kingdom. This is in use even in adjacent Ceylon where in the City of Colombo there are nearly 10,000 private consumers. In view of the fact that for quite some time to come, a radio receiver will be beyond the reach of the common man and also that radio relay can serve in non-electrified areas also, there is considerable scope for such services in our country and more so in our State, provided the Government of India accord the necessary permission to proceed with the work.

Intensive Manuring Scheme

The Government have sanctioned the continuance of the Intensive Manuring (Paddy) Scheme during 1956-57 under the control of the Board of Revenue in all the districts except the Nilgiris and Madras during a period of six months from May, 1956 to December, 1956. The date of commencement in each district will be fixed with reference to the local needs and conditions.

The loans will be sanctioned by the special revenue staff to be appointed for the purpose, while in the National Extension Scheme areas, Block Development Officers will continue to sanction the loans as in previous years. The loans will be granted on personal security at Rs. 35 per acre up to a maximum of Rs. 500 per individual. A sum of Rs. 57 lakhs has been sanctioned for expenditure on account of the disbursement of loans.

(*Continued from page* 7)

Papanasam Electricity System—cont.

	Village.	*Taluk.*	*District.*
8	Narasingam	Madurai	Madurai.
9	Thirumughur	Do.	Do.
10	Puduthamaraipatti	Do.	Do.
11	Melakkal	Nilakottai	Do.
12	Kalkurichi	Aruppukkottai	Ramanathapuram.
13	Johilpatty	Do.	Do.
14	Alagianallur	Do.	Do.
15	Keela Alagianallur	Do.	Do.

Madras Electricity System Distribution.

	Village.	*Taluk.*	*District.*
1	Acharapakkam	Madurantakam	Chingleput.
2	Anayappanallur	Kanchipuram	Do.
3	Ariyalur	Saidapet	Do.
4	Athippakkam	Do.	Do.
5	Chokkanallur	Sriperumbudur	Do.
6	Elavambedu	Ponneri	Do.
7	Erivoy	Kanchipuram	Do.
8	Iniliancheri	Trivellore	Do.
9	Kaliyampoondi	Kanchipuram	Do.
10	Kannigaiperu	Trivellore	Do.
11	Katchur	Madurantakam	Do.
12	Karanai	Kanchipuram	Do.
13	Kottaimedu	Do.	Do.
14	Padinallur	Saidapet	Do.
15	Patterai	Trivellore	Do.
16	Soranjeri	Sriperumbudur	Do.
17	Vilingiambakkam	Do.	Do.
18	Voyanallore	Do.	Do.

Expansion of Medical Facilities

Ten crores provided for new Schemes under the Second Plan

LIEUT.-COL. SANGHAM LAL, *Director of Medical Services.*

In a vast country like India with a population of nearly 360 millions, of which about 85 per cent live in 563,000 villages, the problem of medical relief and public health presents a serious challenge. Life in a village is not easy. Water supply is unsatisfactory and road communications in rural areas is very poor. Social amenities or cultural activities are rare. The standard of education and economic status of the villages is low. The sanitary conditions are primitive and the greater part of rural population suffer from general malnutrition and are subject to periodic epidemics, e.g., cholera, typhoid, dysentery, etc. A very low standard of personal and environmental hygiene is met with among a very large section of people in both urban and rural areas. There is a great dearth of qualified doctors, nurses, health visitors and other Medical and Public Health personnel. The existing organizations for Curative and Preventive Health work are totally inadequate for the task facing them. On the medical side, existing staffs are struggling with large number of patients crowding the hospitals and dispensaries. On the public health side, the energies of the meagre staff employed in the State are mainly concerned with measures for the control of epidemic diseases. To sum up, various factors responsible for the low level of health in this country are prevalence of malnutrition among an appreciable section of the people, serious inadequacy of existing provisions for affording health protection to the country and a group of social causes, e.g., poverty, unemployment, illiteracy and ignorance of hygienic mode of life.

India launched on a First Five-Year Plan which came to an end in March 1956. In this plan, some—though not adequate—emphasis was laid on improving Medical and Public Health standards of the country. The Second Five-Year Plan which has come into operation from 1st April 1956, is much more ambitious and in it great stress has been placed on improving the health of the people. A total provision of Rs. 925·63 lakhs has been made for medical schemes.

The various schemes proposed in the Second Five-Year Plan will give an increase of 5,500 beds in the total bed-strength of the medical institutions in this State, i.e., an increase of about 43 per cent over the existing bed-strength of 13,100. The schemes would, however, ensure that the standard of treatment in the hospitals and of teaching in the various colleges will be very considerably improved and it is with this end in view that a number of special schemes have been drawn up for the improvement of the Medical Colleges and the major hospitals attached to medical colleges.

The various improvements to the Medical Colleges and attached hospitals have been prepared with the following objects in view :—

(*a*) To make the facilities available for teaching under-graduates and post-graduates up to date and modern both in the pre-clinical and the clinical departments.

(*b*) To promote research in the various departments by providing adequate equipment and staff.

(*c*) To provide healthy and residential quarters to the students and inmates and promote their general well-being.

The Madras Medical College has been without a hostel so far and the construction of a hostel has been provided for. In the General Hospital, Madras, it is proposed to provide facilities for a higher standard of treatment in Thoracic Surgery, Cardio Vascular Surgery, Neuro Surgery, etc. Additional equipment has also been proposed for opening an artificial limb centre in association with the Orthopædic department and a Museum for the Pediatric Section. Provision for the most modern equipment for Radio Therapy treatment in the X-ray department has also been included in the proposals.

A comprehensive scheme of improvements to the district headquarters hospitals has been drawn up. All these hospitals are largely overcrowded and the improvements contemplated include expansion by the construction of new buildings as well as additional equipment and staff to provide additional facilities for treatment. At the end of the plan period, there will be an increase of 2,028 beds in all the district headquarters hospitals put together. In addition, Tuberculosis, Venereal diseases and Dental clinics will be opened in each hospital or the existing clinics improved in accordance with the All-India Plan.

Full time Family Planning Clinics have already been opened in three Government Women and Children Hospitals in the City of Madras and in four district headquarters hospitals. Part time Family Planning Clinics have also been sanctioned for all the other nine district headquarters hospitals. It is proposed to sanction full time Family Planning Clinics in these nine district headquarters hospitals also during the Second Five-Year Plan.

The Plan provides for the Government taking over 28 taluk headquarters hospitals now run by local bodies. These, as well as the taluk headquarters hospitals already under Government management will be improved. It is proposed to have a bed-strength of at least 50 in each taluk headquarters hospital and at the end of the Plan, the total bed-strength in these hospitals will have been increased by 1,280.

The construction of quarters for nurses will be undertaken wherever necessary in the district and taluk headquarters stations. One hundred and forty additional primary health centres will be opened in the National Extension Service Blocks in the Plan period. It is proposed to open twelve additional subsidiary centres for the treatment of leprosy in places where there is high incidence of the disease and the scale of assistance for private bodies doing leprosy work will also be increased. The Mental Hospitals at Madras and Kozhikode will be improved and in addition, a home for mental defectives will be opened in the Mental Hospital, Madras. A new Mental Hospital is proposed for Madurai. A chronic diseases hospital with a bed-strength of 500 will be opened in the City and this will help to relieve the congestion in the various City hospitals. The construction of an Infectious Diseases Hospital at Madurai has been approved by Government and will be implemented during the Plan period.

In order to promote research in the various fields of Medical science, the Government have been giving a grant of Rs. 25,000 per annum to the Madras State Research Committee. During the Second Five-Year Plan, the amount of annual grant will be doubled and it is proposed to give a grant-in-aid of Rs. 50,000 per annum. This will help to expand our research activities.

There are special training schemes for technicians, nurses, maternity assistants, opticians and pharmacists and a scheme for deputing 100 teachers for training in the United Kingdom to handle various subjects in the Medical Colleges.

Ninety rural dispensaries of modern medicine will be provincialised during the Plan period and in addition, the doctors in 25 Local Fund and Municipal hospitals and other dispensaries run by local bodies will be provincialised.

Extension of Rural Medical Relief by opening a large number of Primary Health Centres deserves special mention as it is felt that in this scheme lies the answer to the problem of reaching the people in the villages and giving them relief and the important feature of integration of curative and preventive aspect. It is anticipated that the major part of rural area in the country is to be covered by National Extension Services by the end of the Second Plan. Each Community Project is intended to cover a rural population of 200,000 divided into three Development Blocks taking an average population of about 67,000. Population in one Project area is scattered over about 40 square miles in villages each with a population between 300 to 1,000. As already stated, the conditions in these villages are primitive as far as environmental sanitation and health services are concerned. The following outline of health service would be established.

Primary Health Centre

This will be the focus from which health activities will radiate into the area covered by one development block. The centre will have a dispensary with a consulting room with diagnostic facilities and a ward of six beds will be provided. The services to be provided will include—

(*a*) Medical Relief.

(*b*) Maternity and Child Health work.

(*c*) School Health.

(*d*) Health Education.

(*e*) Environmental hygiene including sanitation and anti-malaria measures.

The Medical Officer, Compounder and Health Inspector will be located at the Health Centre. Four Maternity Assistants would on the other hand be made to live in selected places within the area covered by the Development Block. The Maternity Assistants may be given some training in nursing to help them to provide better domiciliary service.

The Medical Officer will be responsible for both curative and preventive health work. He will thus not only attend to the dispensary but also supervise the work of the Public Health Staff. He will periodically visit the villages in the block by a definite programme.

The Health Inspector will visit the villages periodically, give advice and instruction regarding protection of water supply, sanitation and drainage and also be in charge of protective and inoculation work.

Health Visitors will supervise the work of Maternity Assistants and be responsible for ante-natal and post-natal work. They would also take part in health education and Family Planning through personal talks in the homes.

The Secondary Health Centre would be located at headquarters of each project—in most cases there would be hospital facilities (Taluk Headquarter hospitals).

Functions of Secondary Health Centre.

There will be a Medical Officer with public health experience charge of Health Services of each Project. He will exercise Supervisory control over all curative and preventive health work done in the whole area. He will periodically inspect the three health centres and act as a senior adviser in all health matters to the Project Administration. As environmental hygiene and sanitation has been given top priority, an assistant Public Health Engineer is essential for organising and supervising the water-supply, drainage and sanitation.

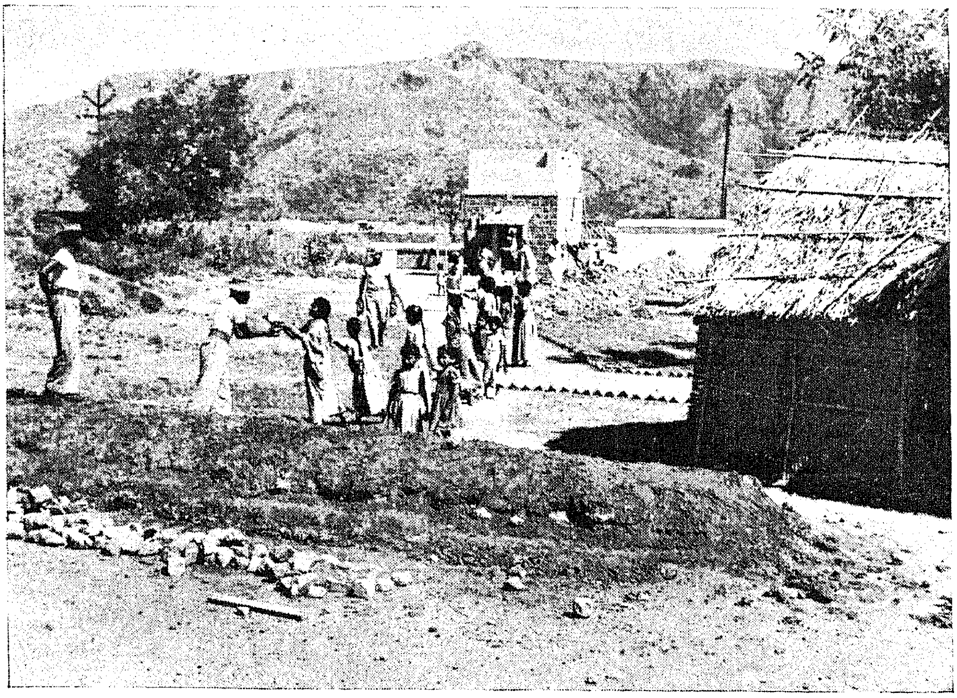
The Lady Doctor in charge of Maternity and Child Welfare Services will periodically visit Health Centres, supervise the work of Health Visitors, Maternity Assistants and take part in domiciliary midwifery when necessary.

Health Education must form an essential part of any health scheme. The simplest laws of health, hygiene and sanitation are unknown to many of our people. The health personnel employed in the Project must take an active part in the dissemination of knowledge so essential for man's well being. There must be full co-operation between Health and Education personnel in this respect and such education must begin from the child and go right up to the oldest adult.

While there has been considerable improvement in the matter of provision of medical relief in recent years and much has been achieved still much

(*Continued on page* 20)

Cadet Corps Builds a Colony

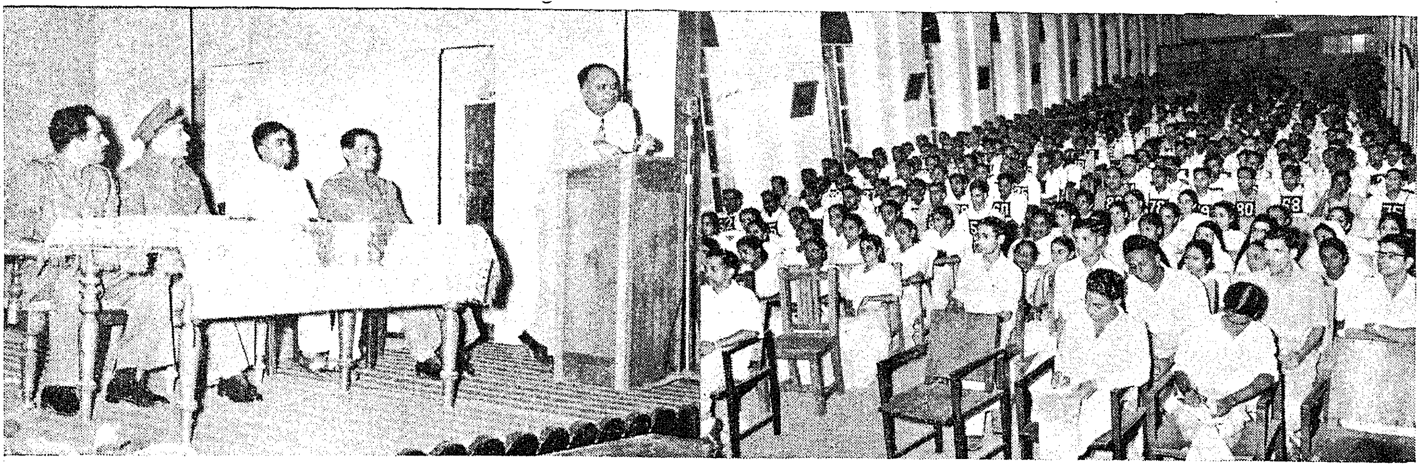


Training in democratic leadership—*900 N.C.C. Cadets complete camp in Coimbatore.*—Social service is not a new thing for the N.C.C. In the Madras State, in previous such camps, the cadets built a colony of 53 houses for slum dwellers at Chetput in Madras, constructed a tank bund on the hill slopes at Pennalurpet, besides a mile-long irrigation canal now feeding 78 acres of land, and built a 3½-mile long road and desilted a tank at Chinnalpatti in the Madurai district.

Expansion of A.C.C.

In pursuance of the decision to considerably expand the Auxiliary Cadet Corps, nearly 4,000 male teachers and over 250 lady teachers of High Schools in 7 different States are being trained during the current vacation period. A phased programme has been drawn up for the expansion of the A.C.C. during the second Five-Year Plan. The training camps now being organised are intended to meet the needs of expansion of the A.C.C. during the first year of the Plan period.

The primary aim of the training courses will be to acquaint the teachers with the Cadet Corps movement and to develop in them initiative, leadership and a spirit of co-operation. After training, these teachers will return to their respective schools where they will select and train cadets. Each teacher is required to train a troop of 50 cadets. The teachers who volunteer for this course are selected by the Directors of Public Instruction in different States. The camps, organized and run by the N.C.C. Circle Commanders, are now being held in 7 States, namely Andhra, Bihar, Madras, Travancore-Cochin, Saurashtra, Madhya Bharat, and Jammu and Kashmir.



Auxiliary Cadets Corps Camp inaugurated by Sri R. A. Gopalaswamy, Education Secretary, at the Engineering College, Guindy.

The Role and Responsibilities of Labour Officers

Addressing recently the conference of the officers of the Factory and Labour Department, Sri M. Bhaktavatsalam, Minister for Agriculture and Industries, observed :

" Labour occupies an important position in the life of a nation and no scheme for raising the general standard of living can be successful without the active co-operation and help of labour. To keep labour contented and to enable it to put forth its best, special laws have been enacted to ensure adequate working and living conditions for them. Yours is the onerous duty of enforcing these labour laws. On your successful working depends the development of our industries and improvement in production.

" The directive principles of the State policy laid down in the Constitution of India lay much stress on the protection and welfare of workers. In the labour policy of the First Five-Year Plan emphasis was placed on the effective administration of labour laws.

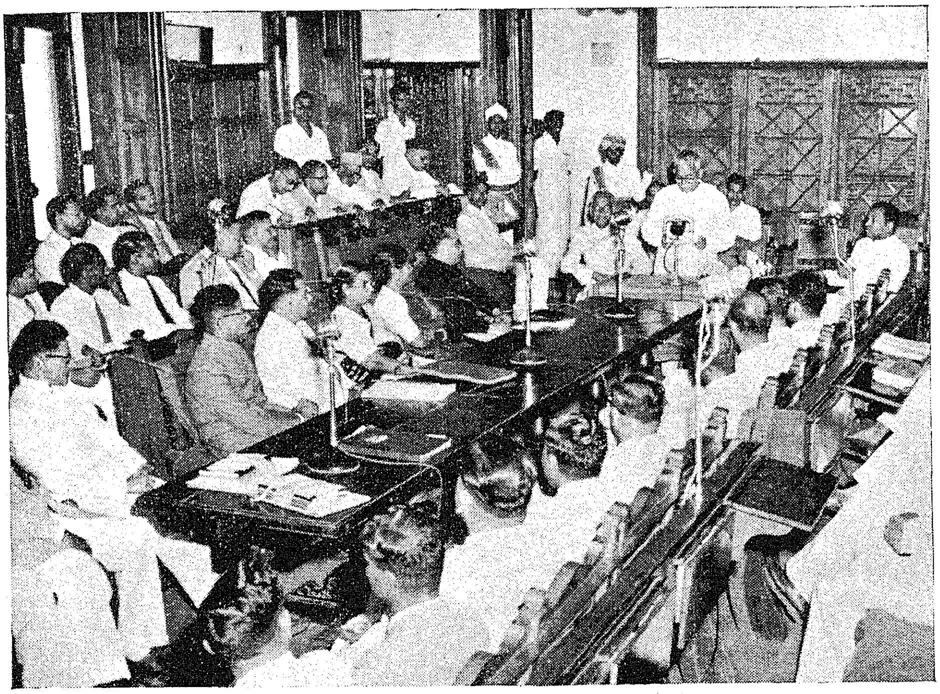
> Education is presumably meant to fit an individual as well as the social group to live the good life and to take us to the Welfare State that we aim at. This must lay stress on individual development, in character training, etc., and the capacity to co-operate with others in the social frame work that is gradually evolving.
>
> —*Prime Minister of India.*

In its essentials the labour policy and approach to industrial relations outlined in the first plan will also hold good for the period of the Second Plan. Much therefore depends on the way in which you go about your task of enforcing the labour laws.

" While labour welfare is the prime consideration in your work, I would at the same time like to remind you that a strict enforcement of the labour laws need not necessarily lead to the harassment of the industrialists.

" A rapid industrialisation with particular emphasis on the development of basic and heavy industries is one of the important objectives of the Second Five-Year Plan. For its successful implementation and for bringing about increase in productivity association of labour with managements and the improvement of industrial relations are essential. In this sphere the officers of your department, especially those on the labour side, can play a very effective part. Your aim should be to promote mutual negotiations and settlement of disputes by conciliation. The Government are aware that the existence of more than one union in industries has not been conducive to good industrial relations. A Bill for the recognition of a single trade union in each industry with certain rights conferred on them is under consideration.

" I am sure you would continue to maintain the high traditions and standards in the administration of various laws for which this State has been noted. You should never falter to do what is just and proper. "



Sri Bhaktavatsalam, Minister for Labour, addressing the Labour Officers' Conference.

Motor spirit of the value of about Rs. 1,26,34,326 was exported from India last year. The maximum quantity valued at about Rs. 23,39,898 was exported to Australia.

Tree-planting for Plenty

July 1st week-Seventh Vanamahotsava

Vanamahotsava initiated in 1950 as a part and parcel of our national endeavour for reconstruction and regeneration, is gathering momentum year after year. Madras State, as in many other fields of national importance and popular welfare, is in the forefront of the Tree Planting Campaign. The progressive numerical increase in the annual tree-planting shows the amount of enthusiasm and vigour that Vanamahotsava has instilled in the minds of people. In the year 1950, 82 lakhs of trees were planted in Madras State of which 40 lakhs survive. In 1951-52, 79 lakhs and 90 lakhs of trees were planted of which 36 lakhs and 40 lakhs respectively survived. During 1953 since the formation of Andhra about 52 lakhs of trees were planted in the present State alone while, in 1954, 52 lakhs were planted and in 1955 the number increased to 57½ lakhs. The target for this year is 60 lakhs. Although the planting campaign may commence from July 1st they can go on till the end of October.

"The object of Vanamahotsava is not merely to plant trees formally here and there but to transform both the landscape and man's mind. Our land was once covered with trees and our religious traditions are bound up with forests. The case for increasing the tree potential of our towns and villages, however, rests not on sentimental grounds but on hard utilitarian considerations. Well managed plantations can provide shade, shelter and fodder for livestock. Small timber and firewood for the community and enable cowdung to be used for fertilising the fields instead of being burnt for cooking food. Massed tree groves will mitigate the regions of the climate. Tree will add colour and beauty to our drab villages."

The State Government have made arrangements for a successful tree-planting campaign this year and it is hoped that the 7th Vanamahotsava will have greater support and co-operation from the public.

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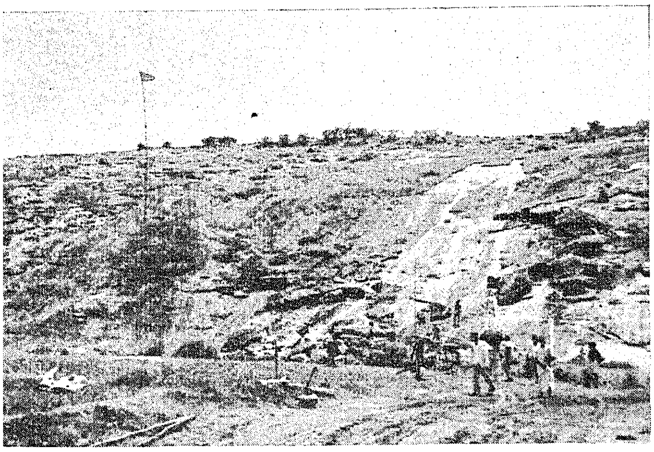
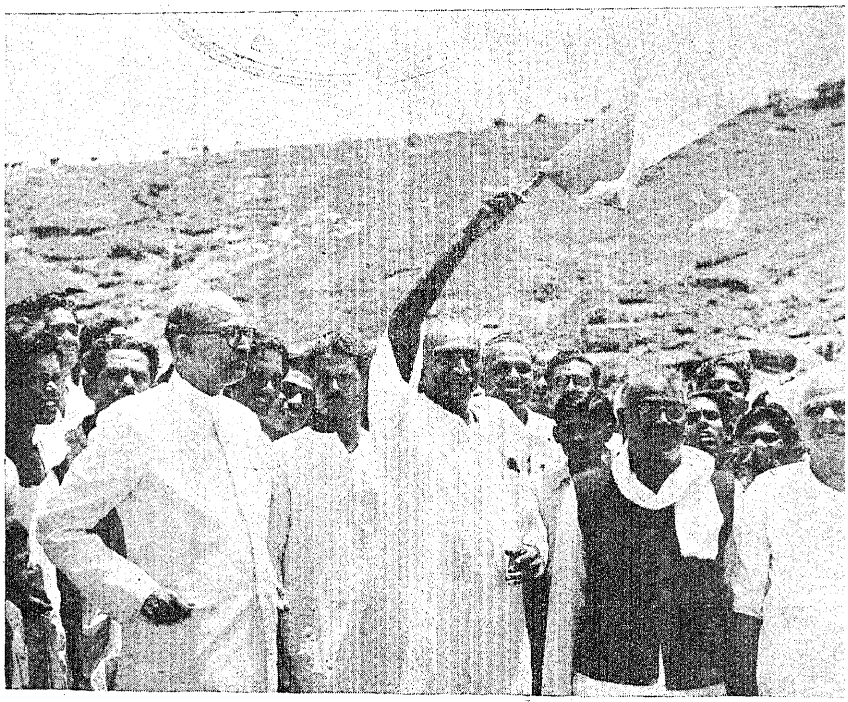
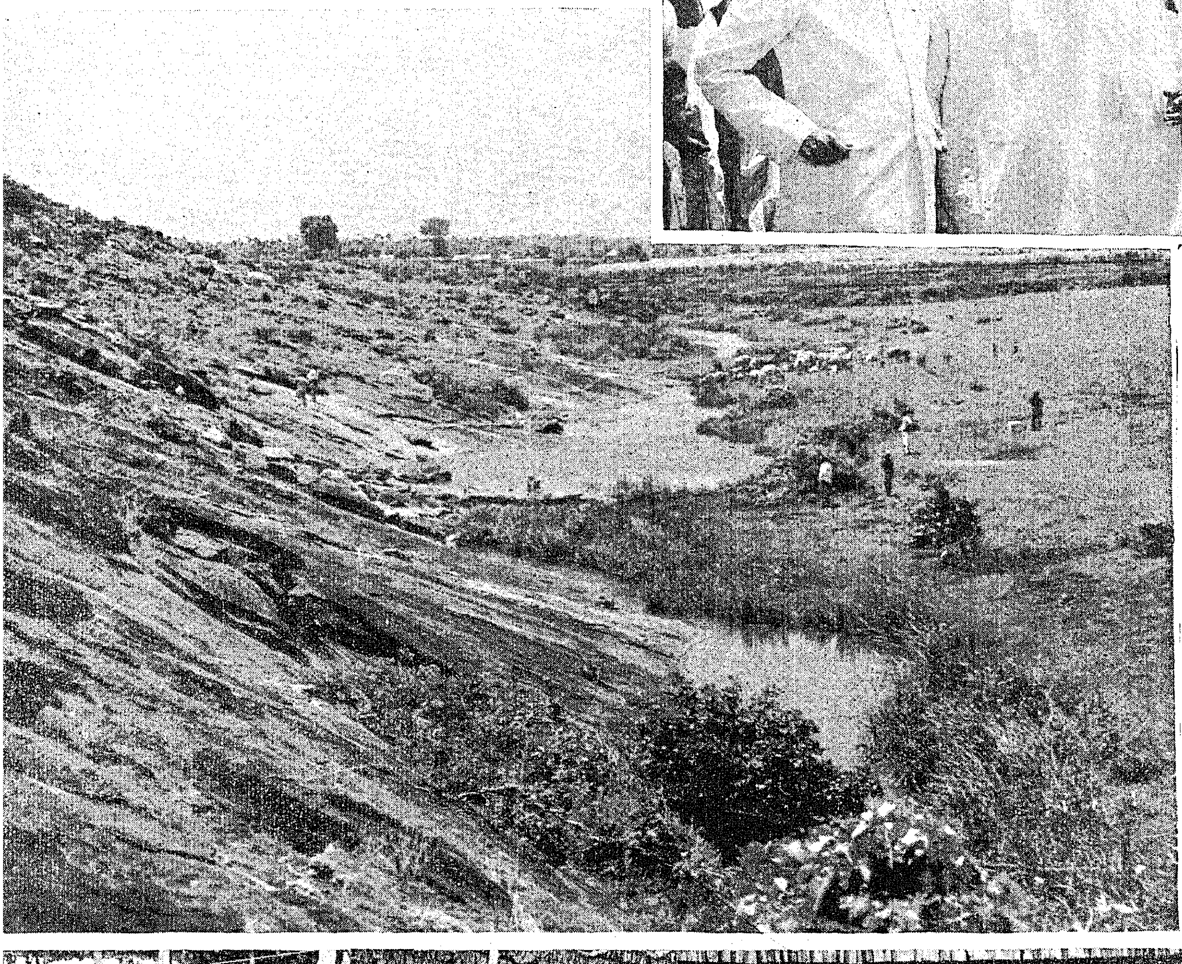
THE INAUGURATION OF MEENKARA IRRGAITION PROJECT

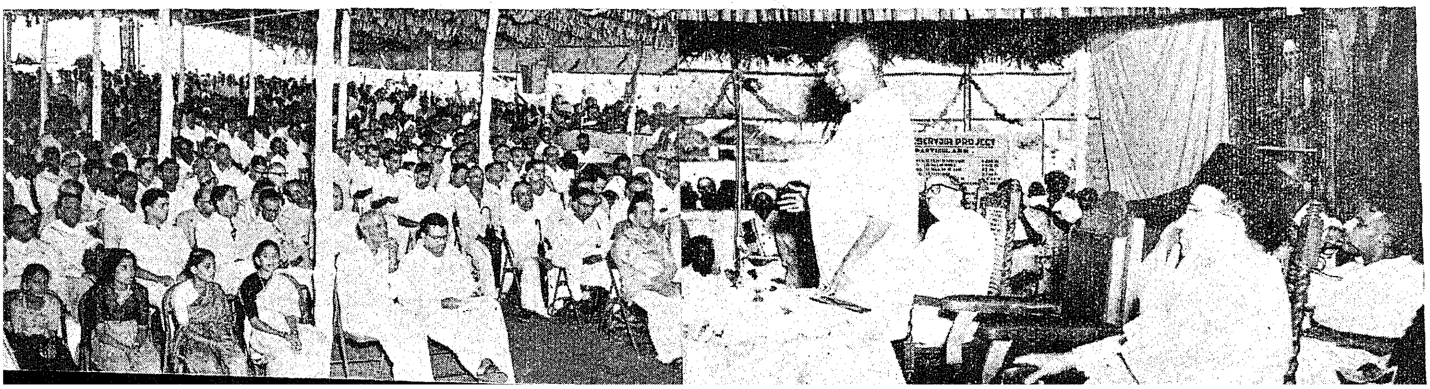


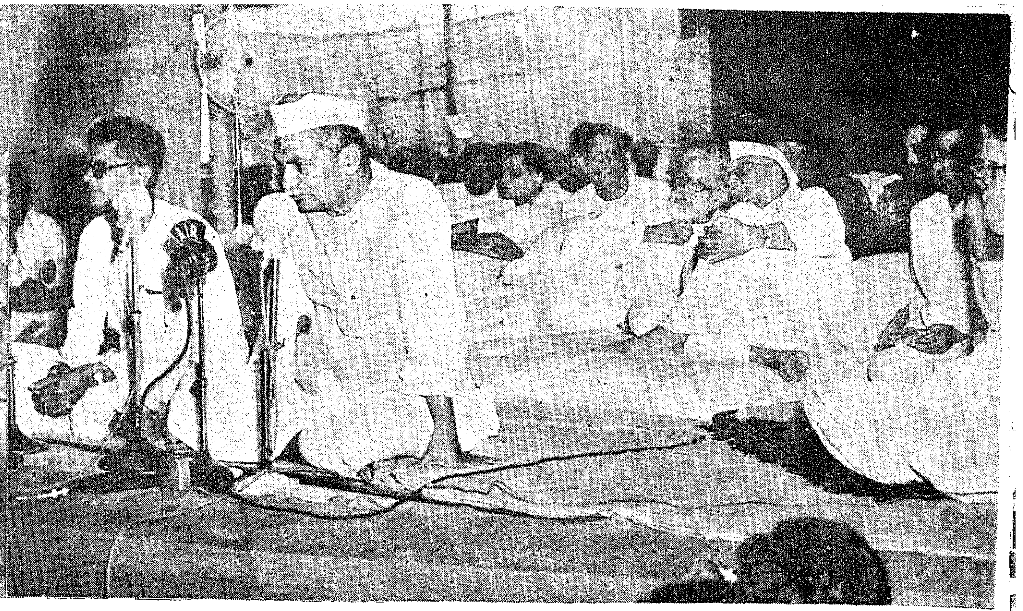




SIGNAL TO STARТ WORK

Pictures show: th project site, the Chie Minister waving th flag as a signal to sta the blasting opera tions, and addressin those gathered at th pleasant function.





THE NATION MOVES
TOWARDS LIGHT,
MORE LIGHT

The historic city of Kancheepuram, famous for its glorious Gopurams, beautiful temples and fine textile designs, assumed prominence yet another way recently, because of the All-India Sarvodaya and Nai Talim Conference held there. The presence of Acharya Vinoba Bhave and Dr. Rajendra Prasad, the President of India, accorded additional significance, and saintly dignity to the occasion.

Acharya Kalelkar lighting the lamp, prior to the commencement of the Basic Education Conference.

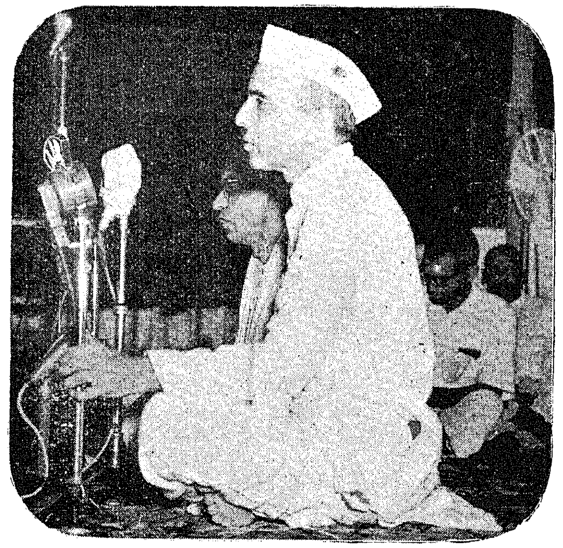
Dr. Rajendra Prasad arriving at the Conference *Pandal.*

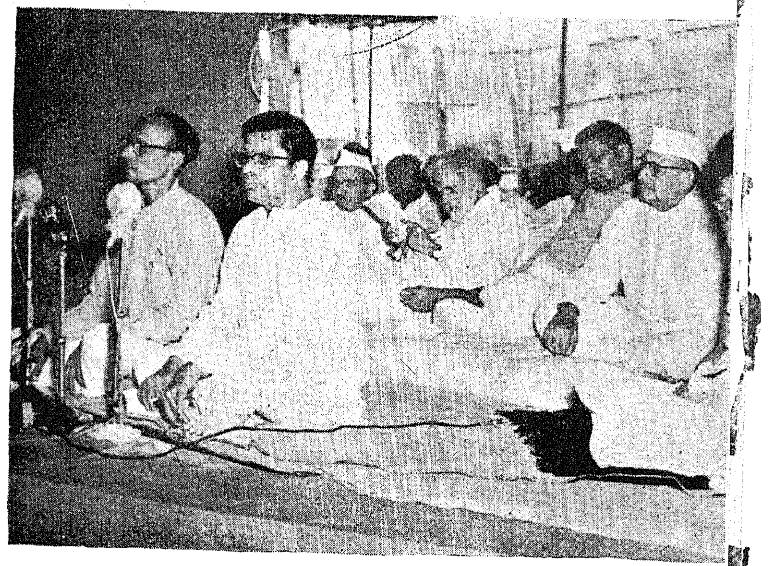
The President addressing the gathering.

Sri Dhebar, Congress President and Sri Subramaniyam, Minister for Education, speaking on the occasion.

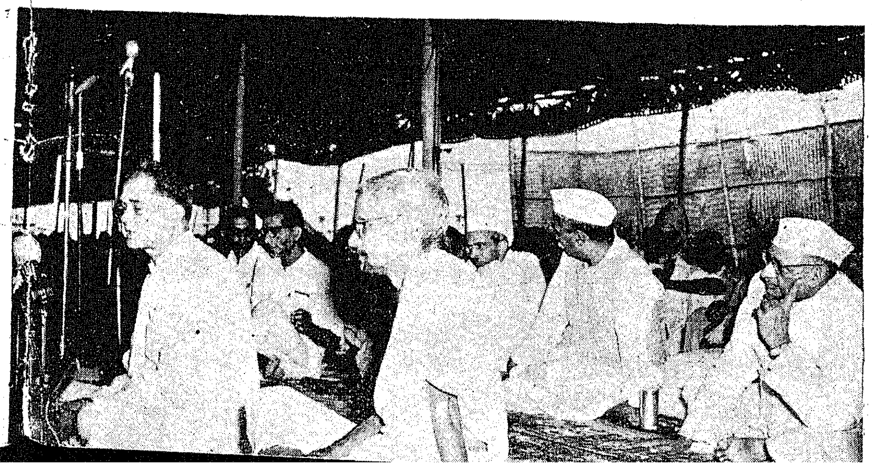
The student-dancers from Santiniketan add poise, rhythm and movement to the conference programme by their performance.

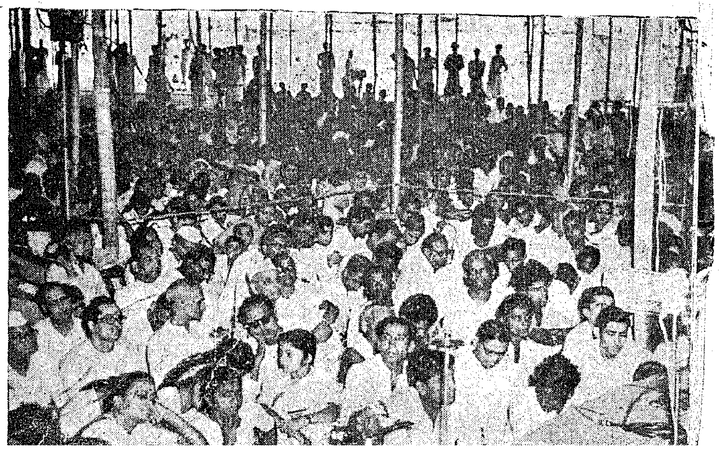
Jayaprakash Narain who has dedicated his life to the cause of Bhoodan and Acharya Bhave, its founder have something concrete and constructive to impress on the audience.

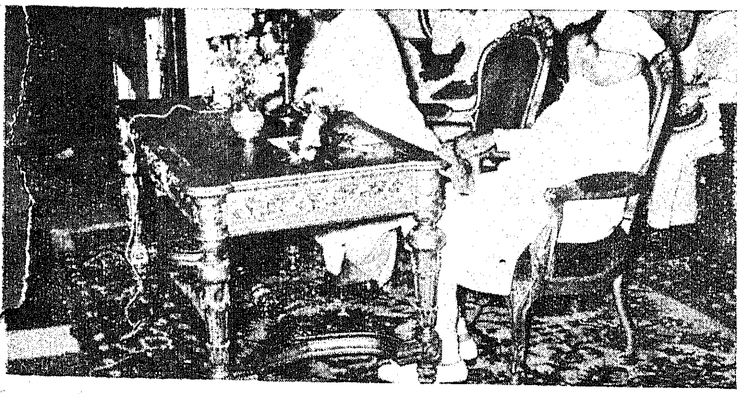


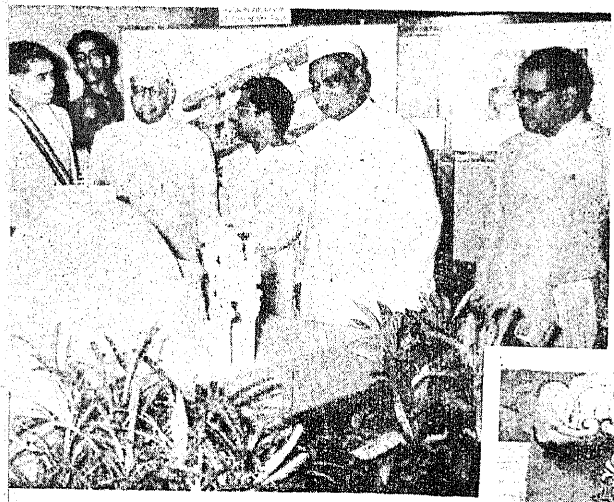


NAI TALIM CONFERENCE IN SESSION

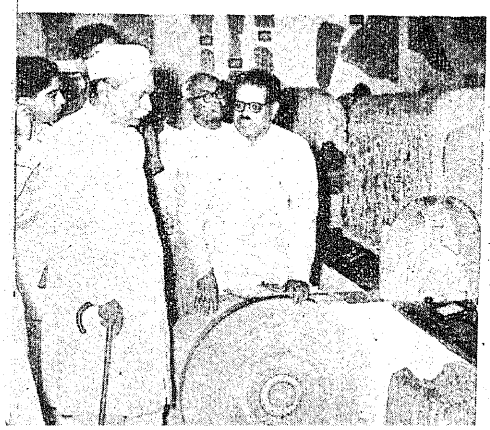








The Art Exhibition opened by the Rastrapathi, was one of the highlights of the Buddha Jayanti Celebration in the City. Ministers, distinguished visitors and art-lovers witnessed the beautiful mural paintings and sculptures, relics and replicas of Buddhist art and architecture exhibited at the Museum Centenary Hall.



Animal Husbandry in Madras State

Schemes under Second Five-Year Plan

DR. D. PATTABIRAMAN, Director of Animal Husbandry, Madras

India is predominantly an agricultural country and the cattle are the backbone of Indian agriculture. Though India possesses large number of cattle, their productivity for milk production and capacity for work are comparatively low. This is due to indiscriminate breeding and lack of breeding, feeding and management on scientific lines.

Madras State possesses 12·1 million cattle, 2·89 million buffaloes, 8·0 million sheep, 4·5 million goats and 10 million poultry. They are indirectly contributing to the tune of Rs. 110 crores annually by their work, production and manure which raises the rural economy in this State.

Animal Husbandry Department has been doing yeoman service to the rural public to raise the standard of the cattle, sheep and goats, and poultry for increased production of milk, meat and eggs and to raise the working capacity of the work animals.

There are five livestock farms in this State at Hosur (Salem district), Orathanad (Tanjore district), Koila (South Kanara district), Thiruvazhumkunnu (Malabar district) and Pudukkottai (Tiruchirappalli district) with the main object of supplying approved and pedigreed bulls of Sindhi, Kangayam, Gir, Umblachery and Murrah Buffalo breeds to the public for breeding purposes. The farm at Hosur is one of the premier farms in the State and breeding of Sindhi herd for production of pure-bred and pedigree bulls has been of a very high order in this farm when compared to the other farms in the whole of the Indian Union. Breeding of Kangayam herd both for milk and work is being done separately. Gir breed which is noted for its milk production was also introduced about five years ago in this farm and it is progressing very well and a number of bulls have also been supplied to the public. It needs mention that the Sindhi breed, the home tract of which is Karachi, is available only in a few places in India and the demand for breeding bulls is so great that this State is receiving indents for supply of pedigreed breeding bulls from States like Orissa, Bihar, etc. The other livestock farms at Orthanad, Koila, Thiruvazhumkunnu, and Pudukkottai are of recent origin and they have already started distribution of pedigree bulls from the foundation stock supplied from Hosur Cattle Farm. These farms were opened as part of Post-war development schemes.

The Government have got about 1,405 bulls of different breeds under various schemes in the State. The premium scheme envisages the grant of Rs. 200 per annum to owners of approved bulls maintained under certain conditions stipulated by the department. The Government Free distribution scheme and the District Board contribution scheme aim at distribution of breeding bulls of distinct breeds suited to the locality to cattle owners who are interested in the improvement of livestock and who own large number of cattle. These bulls are purchased by Government and by District Board with Government grant respectively and distributed to selected custodians and after the maintenance of the bulls for a period of three years by the custodians under certain conditions, the ownership is vested with the custodians.

Apart from the sale of breeding bulls and bulls distributed under the above schemes, Madras State has introduced the technique of Artificial Insemination to meet the shortage of pedigree bulls. This Technique was first started at the Madras Veterinary College during the year 1948. There were only two centres at Madras and Coimbatore at that time and now there are seven artificial insemination centres spread over in the State in important district headquarters. Though this technique was not appreciated in the beginning from a sentimental point of view, it has now gained momentum, especially in the breeding tract of Kangayam cattle in Coimbatore district and the demand for such centres has considerably increased throughout the State as a result of which about 13 more centres are to be started during the Second Five-Year Plan period. The advantages of having the animals artificially inseminated are as follows:—

(1) There is no necessity to worry about the size of the breeding bull when compared to the size of the cows; (2) the semen from a bull can be utilised to impregnate at least 40 cows; (3) semen from different breeds of cattle can be easily made available to the cattle owners by quick transmission throughout the State.

Key Village Scheme

For effective livestock improvement throughout the Indian Union, the Government of India sponsored a scheme called "Key Village Scheme" by which livestock improvement is to be effected in a compact and contiguous area by castration of all scrub bulls with the enforcement of Madras Livestock Improvement Act, by having an Artificial Insemination centre in the main centre with a few sub-centres round about and by distribution of pedigreed bulls in the area for natural service. These Key Village centres are mainly to be located in the breeding tract of distinct breeds so that the first generation of bull calves will be utilised

for further distribution as pure-bred bulls in due course. Simultaneous problems relating to the development of fodder resources, milk recording, progeny testing, co-operative marketing of milk, etc., should be tackled in stages taking into consideration the prevailing conditions in the area. Such Key Village centres were opened in this State as early as 1952–53 and at present there are nine Key Village centres and seven artificial insemination centres. Apart from the above nine Key village centres, there are six Key Farm centres in private institutions where assistance to private cattle breeders are given to supplement the work carried under the Key Village Scheme. Since there is a tendency to sell away superior male calves born for approved bulls in the above area, and in order to create an incentive to cattle owners to rear calves up to maturity, a subsidy of Rs. 10 per calf per mensem from the date of weaning to the date of maturity is being paid. Calf rallies and cattle shows are arranged periodically to create enthusiasm and competitive spirit in raising good type of animals. At present these Key village centres are located in the breeding tract of Kangayam and will be gradually extended to other areas during the Second Plan period.

Cross-breeding scheme, Ootacamund

With a view to improve the local non-descript cattle in the hilly high rainfall areas in the State, a scheme called the "Cross-breeding scheme" is being worked at Ootacamund as participants of the scheme sponsored by the Indian Council of Agricultural Research. Semen from Jersey bulls is being received on three days in a week by air from the Central Artificial Insemination centre at Bangalore and animals are inseminated with that semen in the main centre at Ootacamund. There are four sub-centres at present at Davani, Thummanatty, Prospect Estate and Nanjanad and semen is sent to those centres for insemination of cows that are received at the sub-centres. The scheme is progressing well since its inception in January 1955.

Salvage farm

The Madras City Milkmen were finding it very difficult to maintain their cows during the dry period and to avoid maintaining them unnecessarily without income during the dry period and for want of proper facilities in the City and round about, some of them resorted to sale of valuable cows to slaughter-houses. To avoid such depletion of milch animals, a salvage farm is located in the Kambakkam Reserve forest area in Chingleput district. The object of this farm is to provide home for the dry cows of the Madras City during the dry period and to maintain them at this farm at a nominal cost of Rs. 10 per mensem and to return them after calving. Breeding bulls are also maintained at this farm for services of the cows admitted for salvage.

Sheep and goat development

It has been estimated that the sheep and goats contribute about Rs. 1·75 crores worth annually by way of meat wool, manure, and export of these animals. It is essential that the local non-descript sheep of both mutton and woolly variety should be developed to yield more wool, and meat by mating them with improved breeds of sheep like Bikanir, Nilgiri, and Coimbatore breed for more wool production and like Mandya and Karuvai breed for more meat production.

With this object in view, the Government started as early as 1942, three sheep shearing demonstration units with one Veterinary Assistant Surgeon and two shearers with headquarters at Coimbatore, Madurai and Cuddalore to train the professional sheep-breeders on the improved methods of shearing, grading wool, by practical demonstration and to educate them on the scientific breeding, feeding and management of sheep to get increased income through their sheep on which they depend solely for their livelihood. These units have done good work in the field and because of more demand for such units, three more units have just been sanctioned recently and they will be started early.

The livestock farm at Hosur is maintaining a flock of Mandya sheep and another flock of Bikanir sheep for production of pedigreed rams for distribution and sale to the public. But the necessity for the improvement of Nilgiri breed of sheep was keenly felt as the breed almost became extinct in spite of its quality for fine wool production. The available Nilgiri breed of sheep were purchased during 1950 and a sheep farm with 600 acres on the Wenlock downs near Ootacamund was established to develop the Nilgiri breed by distribution and sale of rams to the public for increased production of wool. In addition to selective breeding done at this farm cross-breeding is also being done with Romney Marsh Rams from Austrial for producing quality rams to increase the quality and quantity of wool among the Nilgiri sheep. This farm has been selected as one of the sub-centres for conducting cross-breeding experiments for improvement of wool quality for the Southern region under the scheme sponsored by the Indian Council of Agricultural Reasearch. Having established the farm for improvement of wool, the necessity for wool analysis laboratory was felt to find out the quality, length and other factors in the wool produced from the sheep, a small wool analysis laboratory has been started at Ootacamund.

As regards goats, the district Livestock Farm, Thiruvazhumkunnu, is maintaining a flock of Malabar Goats which are noted for its milking qualities for production and supply of bucks. Apart from the Malabar variety of goats, no other breed has been introduced in this State.

Poultry development

Poultry farming has almost become a backyard industry as most of the villagers rear poultry in the backyard of their houses as poultry supplies eggs and meat which are essential in human diet as suppliers of animal protein. The demand for hatching eggs, chicken and adult birds of exotic breed has considerably increased in recent years. There are two large-scale nucleus poultry farms, one at Madras and the other at Hosur Cattle Farm each of them maintaining nearly 1,000 birds. In addition there are also District Poultry Farms at Cannanore and at the cattle farms at Koila and Orathanad. These farms are supplying improved varieties of birds and hatching eggs of mostly white Leghorn, Rhode Island Red, Black Minorca breeds.

There are 22 Poultry demonstration units attached to important Veterinary Institutions to serve as demonstration units for rearing of poultry, etc. These units are also supplying birds and eggs in and around the places where they are located.

There are also poultry production centres at Saliamangalam (Tanjore

district), Malli in Ramanathapuram district, Kinnigoli in South Kanara district and T. Kallupatti in Madurai district which are in the rural development areas selected for intensive livestock improvement.

Disease control

In the foregoing paragraphs the details as to the livestock improvement work done in the State were furnished. It is a well known fact that there are certain contagious and non-contagious diseases among the cattle which are the impediment to livestock improvement work. Among the contagious diseases of cattle, the most dreadful disease is Rinderpest which was sweeping away cattle in large numbers in previous years. It is a matter of pride to this State, that, in having eradicated this disease throughout the State and in order to avert the possible ingress of infection of Rinderpest from the adjoining States, quarantine stations have been opened in the border areas under the All India Scheme for eradication of Rinderpest wherein all the animals entering the State are inoculated against Rinderpest, branded and allowed entry into this State. The rest of the common contagious diseases like Haemorrhagic Septicaemia, Black Quarters, Anthrax are controlled by vaccination of the cattle and by adopting preventive measures. In addition to the vaccination of cattle, sheep and poultry against all contagious diseases in the field by Veterinary Assistant Surgeons in charge of touring billets and minor Veterinary dispensaries treatment of non-contagious diseases is being done in Veterinary Institutions located almost in every taluk headquarters of the district throughout the State. Now there are 104 Veterinary Institutions in the State which render Veterinary aid to the cattle owning public. In some of the major Veterinary Institutions, the Veterinary Assistant Surgeon is assisted by a Veterinary and Livestock Inspector or a compounder in the treatment of cases, etc. These Veterinary and Livestock Inspectors who assist the Veterinary Assistant Surgeons are also attending Veterinary first aid centres periodically, say, thrice a week located in and around the Veterinary Institutions within a radium of about 10 to 15 miles. 13 clinical laboratories in the district headquarters Veterinary Institutions and livestock farms for the early diagnosis and confirmation in the control of epidemics are functioning in this State under the schemes in the First Five-Year Plan. In addition a scheme for the control of Brucellosis on the hilly tract with headquarters at Coimbatore is working for quick diagnosis and treatment of Brucellosis which is responsible for heavy loss of milch cattle.

The various biological products required to combat contagious diseases like Rinderpest, Black Quarters, Hamorrhagic Septicaemia, Anthrax, etc. among cattle, Ranikhet disease, Fowl pox, etc., among and sheep pox, etc., among sheep are produced at the Institute of Veterinary Preventive Medicine, Ranipet. These vaccines are produced under experts trained in the manufacture of biological products both in this country and abroad and the efficacy of these vaccines is well appreciated in the field. Besides this, there is a well equipped and up-to-date laboratory at the Institute for microscopical examination and diagnostic purposes.

The trained personnel required for the department to work out the various schemes and to be in charge of various institutions are produced at the Madras Veterinary College, Madras. Since the inception of the College in 1903, there was only a diploma course of three years and this has, by gradual improvement and expansion, now been affiliated with the Madras University with the B.V.Sc. Degree course which runs to four years and one term. The degree holders are well trained in the different branches of Veterinary and Animal Husbandry subjects. The redeeming feature of this College is that it trains students not only from this State but also from other States like Andhra, Mysore, etc. Periodically students from countries like Iran and Iraq, China and Burma are also entertained for training. The Veterinary and Livestock Inspectors' Course which was started during 1948 was intended to give training in the broad principles of Veterinary Science and Animal Husbandry for a period of two years so that the Veterinary aid can be rendered in rural areas through a cheaper agency. To meet the increased demand for technical personnel and to train persons in still more short a time, the above course was abolished during June 1954 and the Stockmen course was started in 1954–55. This is intended to give the candidates training in the elementary knowledge in the subjects related to Veterinary science with special emphasis on animal husbandry. The number of seats to this course is confined to 55 for the present. In addition to the above course, a flaying course is conducted to train professional as well as amateurs in the art of flaying as at present the skin value is lost by unscientific and crude method of flaying.

Animal Husbandry and the Community Development Programme

In the rural uplift of community development programmes Animal Husbandry plays an important part. In fact the rural developmental work connected with Animal Husbandry is not new to the Veterinarians. The major portion of the work had always been done in the rural parts in the part and this department continues to do so even now. Everybody is aware of the fact that both Agriculture and Animal Husbandry are clubbed together and no Agriculturist can prosper, unless his cattle prospers. The duty of the Animal Husbandry department in the Community Development programme is to improve the quality of cattle both for milk and draught purposes in the development areas and to provide Veterinary aid within the easy reach of the Agriculturist.

The Livestock improvement work in the Community Development areas has received much attention. The work is concentrated on grading of village cattle, poultry and sheep. Artificial insemination centres, poultry units and centres for sheep and goat rearing are in progress in the community Development Projects and blocks. The village livestock improvement scheme for grading up the local cattle is in operation in Five National Extension Service blocks of this State.

The details of work done in the various community development blocks which number 83 so far are given below :—

1. Breeding and artificial insemination centres started	90
2. Bulls castrated	55,056
3. Pedigree bulls supplied.	458
4. Pedigree birds supplied.	7,368
5. Cattle inoculated and vaccinated	853,584
6. Cattle treated	281,463
7. Poultry units started ..	125
8. Breeding bulls at stud.	336
9. First aid centres working.	58
10. Veterinary Institutions run	19

According to the plan, the entire State will be covered by the National Extension Service block before the end of the Second Five-Year Plan. It is hoped that at the end of the Second Plan period, with the implementation of the schemes successfully, preceptible improvement in the development of livestock can be achieved.

Schemes under Second Five-Year Plan

Taking into consideration the demand for Veterinary aid, livestock development work, etc., in the State, the Second Five-Year Plan programmes have been drawn for this department. In addition to the achievements already made as indicated above, it is hoped that the implementation of the various schemes under the Second Plan which are given below will not only improve the standard of the livestock in the State but also raise the rural economy of the State :—

I. *Livestock Improvement and Development* :

1. All India Key Village scheme for cattle development.

2. Establishment of Artificial Insemination centres in towns of Madras State.

3. Scheme for the development of feeds and fodder resources in key villages.

4. Organisation of rural herd and milk recording for rural dairy cattle development.

5. Establishment of 42 supplementary extension centres for the utilization of bulls produced in key villages of the State.

6. All India Key Village scheme for cattle improvement—Calf Subsidy Goscheme.

7. Development of four shalas.

8. Special scheme for the development of Goshalas in the State.

9. All India and Regional cattle shows—State shows and district shows.

10. Improvement to the existing livestock farms—Mixed farming at the Livestock Research Station, Hosur.

11. Improvements to the existing Livestock Farms and soil conservation in livestock farms.

12. Improvements to the existing livestock farms— Soil conservation in livestock farms situated in hilly regions.

13. Buildings and Roads—Construction of residential quarters for officers, electrification of the premises and metalling roads in certain livestock farms.

14. Improvements to the District Livestock Farm, Orathanad.

15. Establishment of a cattle farm in Ramanathapuram district.

16. Scheme for the distribution of breeding bulls in the rural areas of the State.

17. Opening of a sheep farm in Chingleput district.

18. Poultry improvement in key Village areas.

19. Poultry development—Establishment of poultry units in National Extension Service Blocks.

20. Subsidy to private poultry breeders and associations.

II. *Control of livestock diseases* :

1. Control of cattle diseases.

2. Increased production of Rinderpest Freeze Dried vaccine at the Institute of Veterinary Preventive Medicine, Ranipet.

3. Opening of new Veterinary Institutions.

4. Purchase of microscopes.

5. Acquisition of lands and provision of Government buildings for Veterinary Institutions.

6. Provision of quarters for staff in Veterinary Hospitals and dispensaries located in permanent buildings where quarters have not been provided.

7. Electrification of Veterinary Institutions.

8. Appointment of additional stockman in the Animal Husbandry department.

III. *Education and Research*:

1. Emerecgency short course in Veterinary training and hostels in farms.

2. Increased admissions to the B.V.Sc. course.

3. Increased admissions to the Stockmen course.

4. Strengthening the departments of Animal Nutrition and Animal Genetics in the Madras Veterinary College.

5. Creation of a chair in Therapeutics and Toxiocology in the Madras Veterinary College.

6. Creation of a chair for Gynaecology in the Madras Veterinary College.

7. Additional buildings to the Madras Veterinary College.

8. Establishment of a livestock research station at the Institute of Preventive Medicine, Ranipet.

IV. *Dairying and Milk Supply* :

1. Cattle Colonisation scheme.

2. Installation of new Plant for manufacture of toned milk at Government Milk Factory, Madras.

(*Continued from page* 13)

remains to be achieved to equalize with that provided by the advanced nations in their countries. It will require a great effort on the part of our country to catch up with the other advanced nations and with given determination this can be achieved.

The modern trend of opinion is overwhelmingly in favour of giving more importance to prevention over curative medicine and envisages the evolution of a doctor trained in Public Health and the curative art to look after the medical needs and public health problems of the rural areas in an efficient manner. In consonance with this a start has already been made by integrating preventive and curative medicine at the village level by opening Primary Health Centres which combine and from which will radiate all activities of the medical and public health departments in the village. It is hoped that this integration will be the precursor of further integration and close co-ordination at higher and higher levels till both the departments fuse themselves into one composite whole.

—*By Courtesy A.I.R., Madras.*

7 - JUL 1956

The Five-Year Plan and Rural Industrialisation

Development of Cottage Industries in Madras State

It has been rightly said by the genius Sir M. Viswesvarayya that prosperity of a country depends on its industry. This statement of one of the leading industrial architects of Mysore is wholly testified by the wealth of the industrially advanced countries like America, United Kingdom, France, Japan, Russia and Germany. It is no exaggeration to say that America and Russia are trying to shape the destiny of the whole world. This is mainly due to the industrial advancement they were able to make in the last two decades. So no country can claim for its legitimate place in the world unless it has developed the industrial potentialities of the country according to a planned programme.

India had lost its glory and eminence on account of her political subjugation under the yoke of foreign rule for the last two hundred years. The foreigners had killed all the indigenous industry in the country during the regime of two hundred years and had made it, predominantly an agricultural country. The teeming millions of our country are now depending on lands and are steeped in poverty and ignorance.

The country owes a deep debt of gratitude to the Father of the Nation, Mahatmaji, whose political sagacity and strenuous struggle opened the eyes of the British who had ultimately conceded to the demand of the country and declared Independence to India on August 15, 1947. Ever since independence every effort is being made to make India strong industrially, economically and politically.

In the Union of India, Madras State is industrially very backward. With a view to make India strong the Government have drawn up first Five-Year Plan to develop the country in every field. In the programme of development planned by the Planning Commission, development of industries has been planned on the following line :—

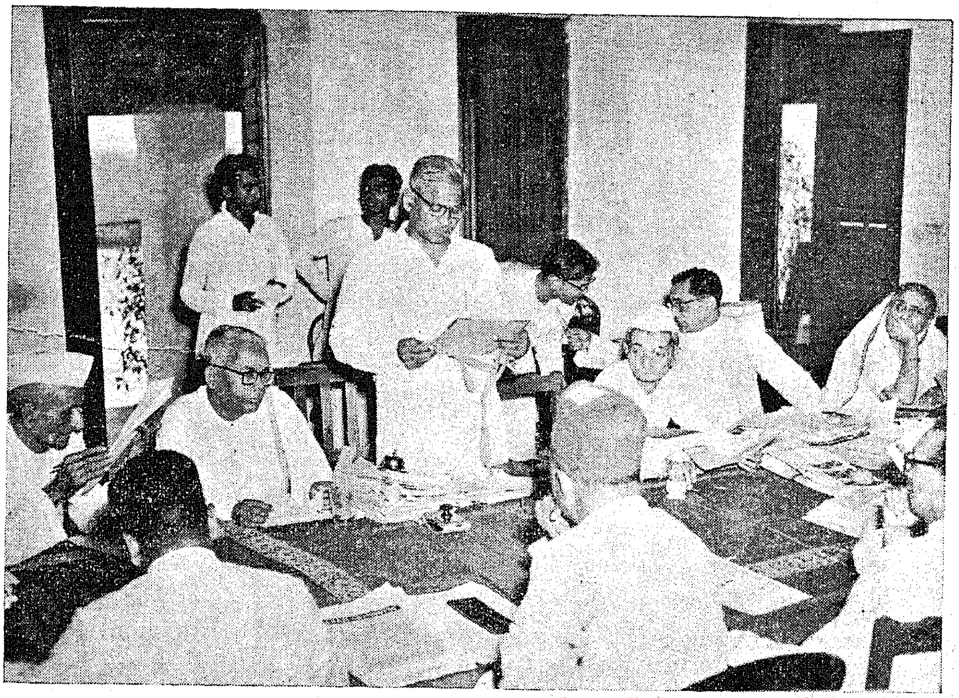
(1) Large Scale Industry.
(2) Medium or Small Scale Industry.
(3) Village and Cottage Industry.
(4) Handicrafts.
(5) Silk Industry.
(6) Coir and Fibre Industry.

To develop each branch of industry detailed above there are appropriate Boards. The All-India Khadi and Village Industries Board and the Handicrafts Board have taken up the responsibility of developing Village and Cottage Industries of the country through the agency of the several State Governments.

Under the First Five-Year Plan th Government of Madras have sanctione the following schemes for the develop ment of Cottage and Village Indus tries :—

1. *Village Industries.*

1 Blacksmithy unit at Karattupala yam (Lower Bhavani Project).
2 Wardha Ghani unit at Sivagiri.
3 Thirty Wardha Ghani units i Community Projects and Nationa Extension Service areas.
4 Distribution of Beehives in Telli cherry block at subsidised rates.
5 Distribution of beehives at Usilam patti block at subsidised rates.
6 Establishment of workshop at Kal lupatti for smithy, carpentry housing design, etc.



State Khadi Board meeting at Kancheepuram—Sri G. Venkatachalapathi, Joint Development Commissioner, is seen explaining the progress of Khadi Development in the State.

7 Blacksmithy-*cum*-welding centre at Buntwal, South Kanara.
8 Scheme for opening a service centre for clay pipe manufacturers in Andimadam.
9 Manufacture of cart wheel hubs in Periyar Project.
10 Manufacture of Chappals in Periyar Project.
11 Manufacture of Chappals in Lower Bhavani Project.
12 Manufacture of Chappals in South Kanara Project.
13 Manufacture of Appalams in Cheranmahadevi, Chidambaram, Attur (Madurai) and Tirukalikundram.
14 Community Smithy shop in Attur Block.
15 Cartwheel hub manufacturing centre in Malampuzha Project.
16 Two carpentry units one at Hebri and another at Sullia, South Kanara district.
17 Blacksmithy centre at Sullia.
18 Gun-metal industry at Kurumbapatti, Periyar Project.
19 Establishment of Demonstration centre for handpounding of rice in Tirunelveli district.
20 Establishment of a production centre for manufacture of Appalams in Madras.
21 Establishment of a training-*cum*-production centre for pottery at Manamadurai.
22 Establishment of a training-*cum*-production centre for pottery at Alankar.
23 Establishment of a training-*cum*-production centre for pottery at Aravacode.
24 Scheme for training of Kudiya youths in Kerala Polytechnic and tribal youths at Karnataka Polytechnic.
25 Scheme for establishment of Demonstration Centres for manufacture of Gur and Khandsari sugar.

2. *Handicrafts.*

1 Scheme for manufacture of fancy articles from fine kora-mats at Pattamadai in Cheranmahadevi Block.
2 Scheme for manufacture of paper toys in Pulivalam village.
3 Scheme for starting of two training centres to develop skill for bamboo workers in Lower Bhavani Project area.
4 Scheme for the development of Cumbly weaving in Attur Block.
5 Scheme for starting a Glass bangle and Bead training centre in Chidambaram Block.
6 Scheme for starting a training centre for the manufacture of bamboo and cane articles in Mudradi.
7 Scheme for setting up of a demonstration unit for sunnhemp fibre cleaning and spinning in Gopalasamudram.
8 Scheme for the establishment of a service centre for the cutlery industry in Malampuzha Project.
9 Scheme for opening of a training centre for basket making in Manjeshwar Block.
10 Scheme for organizing Palmyra fibre extraction industry in the Lower Bhavani Project Area.
11 Scheme for setting up of a production unit for the manufacture of bamboo articles required for daily household purposes at Chinnasalem.
12 Scheme for starting a training centre for the manufacture pith articles at Tiruthuraipoondi.
13 Scheme for establishment of a centre for development of pottery at Karigiri.
14 Scheme for research on glazed pottery in the Ceramic School Laboratory and Kiln, Gudur.
15 Establishment of a Handicrafts Emporium, Madurai.
16 Establishment of a wood seasoning plant at West Coast.

3. *Coir.*

1 Coir demonstration in the Laccadive group of islands.
2 Training of island boys in the Government Coir School, Beypore.
3 Supply of Charkas to the Islanders of the Laccadive and Amindivi groups of islands.
4 Coir Demonstration in the South Kanara district.
5 Training-*cum*-production centre in coir at Sadras in the Tirukalikundram Block.

The object of these schemes is to improve the existing skill of the artisans in the country, improve technique by introducing improved tools and equipments and to make quality goods of manifold utility. Some of these schemes have been implemented in the course of 1955–56 and the others will commence working in the course of the next three months. The aim of the Government is to establish the units sanctioned in the schemes detailed above after the period of training as permanent production centres by converting them into industrial co-operatives managed by the artisans trained and other sympathisers. To solve the problem of marketing under the Second Five-Year Plan period which is to commence from 1956–57 the Government sanctioned marketing organizations in the headquarters of each district to render effective assistance in marketing the surplus products that do not find ready market at the place of production. Besides this there are Sales Emporia to be established in each district to display Cottage and Village Industry products calculated to get wide publicity and marketing facilities. There is no doubt that the development of Cottage and Village Industries is bound to reach the target of the plan period and solve the problems of unemployment and under-employment to a great extent.

Under Second Five-Year Plan period the Government of Madras have proposed the following schemes for the production of Village and Cottage industries. These schemes have been approved by the Union Government and the estimated expenditure on these schemes for the five-year period is Rs. 426·39 lakhs.

List of schemes proposed for 1956–57:

Village Industries.

1 Scheme for providing financial assistance to cottage industralists.
2 Scheme for supply of improved tools and appliances on hire-purchase system to village artisans.
3 Scheme for supply of raw materials to village artisans and workers engaged in cottage industries at cost price.
4 Scheme for assisting village artisans and others engaged in cottage industries by free assignment of lands and grants to convert part of their houses into workshops.
5 Establishment of a marketing organization for sale of cottage industries products.
6 Scheme for conducting experiments on Japanese and other types of Cottage Industries machinery.
7 Establishment of a production-*cum*-training centre for manufacture of Amber Charkas, Bee-hive boxes, chekkus, etc.

(*Continued on page* 23)

Rural Credit through Co-operative Structure

The problem of rural credit is a vast one observed the Registrar of Co-operative Societies, Madras, speaking recently at the Rotary Club. Continuing he said: It is an old problem; but none-the-less an urgent problem especially in the present context of increased agricultural production and improvement in the standard of living of the people. More than 80 per cent of the rural population is dependent on agriculture and possibly the remaining 20 per cent on rural industries. India is a Rural country and the population here is increasing by 4·5 millions every year. To meet the growing needs, agricultural production has also to be stepped up and in the Second Five-Year Plan period it is expected that the production would be increased by about 20 per cent. For this purpose, a dynamic programme of expansion of agricultural credit is necessary particularly as more than 70 per cent of the agriculturists are medium and small scale cultivators. It has been estimated that about 70 crores of rupees are required by the cultivators by way of loans for short, medium and long-term purposes. Loans are required for cultivation, for improvement to lands, for buying fertilisers and also for sustenance until the harvest. Though several measures have been taken in the past, village money-lenders still hold the field. The problem of rural credit is therefore one of supplying credit through institutions which, in the act of supplying will elevate the position of the farmer. The problem is not merely one of giving credit at a low rate of interest or to the extent needed, but is one where the farmer is enabled to use the credit properly and to derive the benefit of increased production and to take advantage of the other economic activities which will give him more return for the produce he raises and make him a better man than what he is to-day.

The Rural Credit Survey Committee has emphasised that co-operation must succeed and made several recommendations of great significance. One major recommendation is that the State should not merely administer but enter as a partner in the co-operative organizations at various levels and participate in the management of co-operative organizations. In Madras we have got a strong co-operative financing structure. The short term financing structure consists of the Madras State Co-operative Bank, the Central Co-operative Banks and the agricultural societies in the districts. The long term structure consists of the Central Co-operative Land Mortgage Bank and the primary land mortgage banks. The Central Co-operative Land Mortgage Bank raises funds by floating debentures and finances the primary banks for the grant of loans to their members for improvement to lands and discharge of prior debts. In this way loans are issued to the extent of about Rs. 5 crores every year. Under the Second Five-Year Plan it is proposed to provide three times the volume of credit and to give during the last year of the plan period fifteen crores of rupees.

Another important recommendation is the establishment of large sized societies, familiarly known in Madras as agricultural banks. The present rural credit societies are small with limited transactions on unlimited liability basis. They have no paid staff. The idea is to form bigger societies with about 500 to 600 members and with transactions ranging from Rs. 2 to Rs. 3 lakhs and with paid staff so that they can serve the needs of the agriculturists more efficiently than at present.

The other important recommendation of the Rural Credit Survey Committee is that the main approach to the problem should be an integrated one. If the ryot is to reap the full benefit of his labour he should have facilities for marketing and processing. The marketing society will also arrange for processing wherever possible. To provide storage facilities, nearly 400 godowns are proposed to be constructed at a cost of 70 lakhs of rupees. The State will take shares in the marketing societies also and provide funds to the societies for the construction of godowns and the installation of processing plants. The godowns will be constructed in villages and at taluk levels. The All-India Warehousing Corporation and the State Warehousing Corporation will construct godowns in bigger towns and other important centres, while the co-operatives will confine their attention to the construction of godowns at the village and taluk levels. Co-ordination between these organizations will be brought about later. These measures are bound to bring about a decided improvement in the economic condition of the agricultural population of the country.

(*Continued from page* 22)

8 Development of handpounding of rice as a cottage industry by establishment of a production centre and District Organization centre.

9 Development of village oil pressing.

10 Development of Village Tanning allied industries.

11 Establishment of multi-purpose work centre.

12 Development of Village pottery.

13 Development of ginning of cotton.

14 Development of decorticating of groundnuts as a cottage industry.

15 Establishment of twenty cottage type match factories.

16 Demonstration-*cum*-training centre for extraction of cashewnut oil and manufacture of syrup, jam, etc.

17 Establishment of a training centre for manufacture of ornamental handles for almirahs, doors, etc.

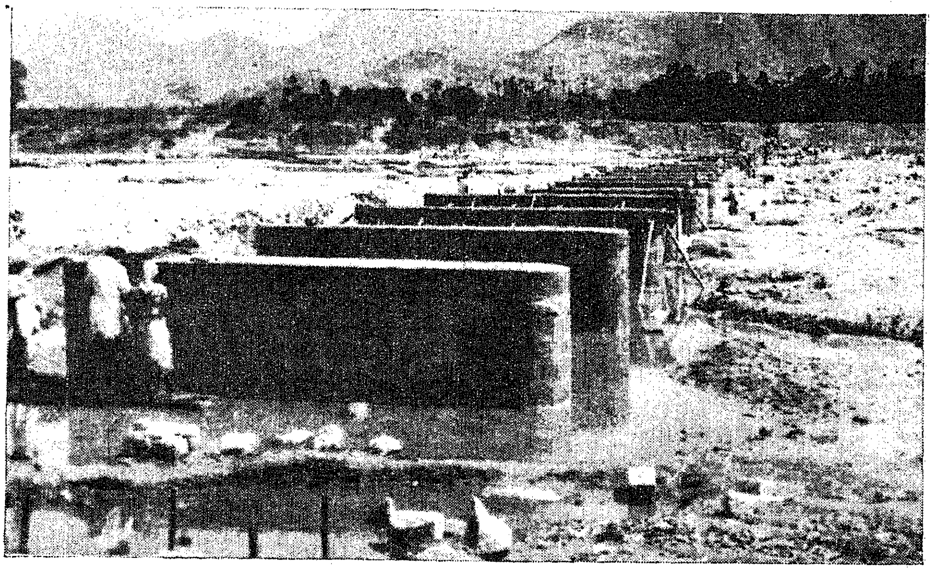
18 Establishment of a demonstration centre for manufacture of Gur and Khandsari sugar.

19 Development of Bee keeping by establishment of research farm at Kodaikanal Nurseries in all districts and distribution of boxes in 60 blocks.

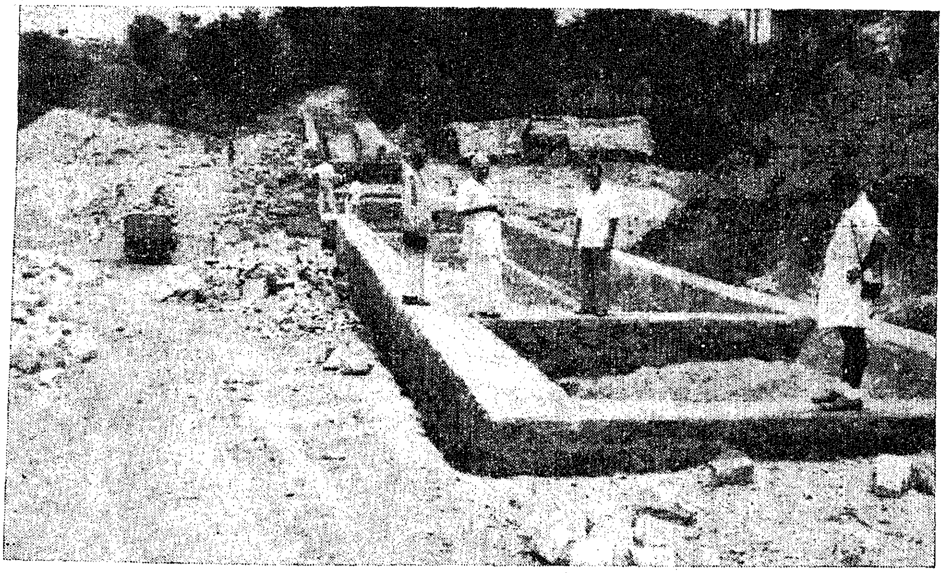
With the completion of the Second Five-Year Plan period it is expected that the Cottage and Village industries will regain its past glory and contribute its share in building up the industrial wealth of this State.

All Roads lead to Prosperity

Quite a big transformation has been achieved in the development areas in Palghat in regard to rural communications according to a report received from the Project Executive Officer. It is reported that there is not a single village now which is cut off from the main roads for want of village link roads or bridges across rivers or streams. This has been largely made possible by the whole-hearted co-operation of the villagers who had readily come forward either in surrendering their lands necessary for the formation of roads or paying the required contributions. The importance of this development cannot be overestimated. According to a close student of rural economics, the most important needs of the village today are (1) drinking water wells and (2) village roads. These two, according to him, should require the highest priority. We are here concerned only with the latter, namely, roads. The development of village communication is one of the most important items in the field of rural reconstruction. It is a common place fact that civilisation follows roads. The isolation of the Indian village which has been largely responsible for its economic and social stagnation is mainly attributable to the lack of communications with the outside world. It has been said that the minimum requirement of road mileage in a country is one mile to a square mile. According to the statistics taken some years ago, the minimum obtaining in India at the present day is ·18 mile per square mile at round about. So, our country obviously has to make a big headway in reaching the minimum and from this point of view, rural road development is a matter of utmost significance.



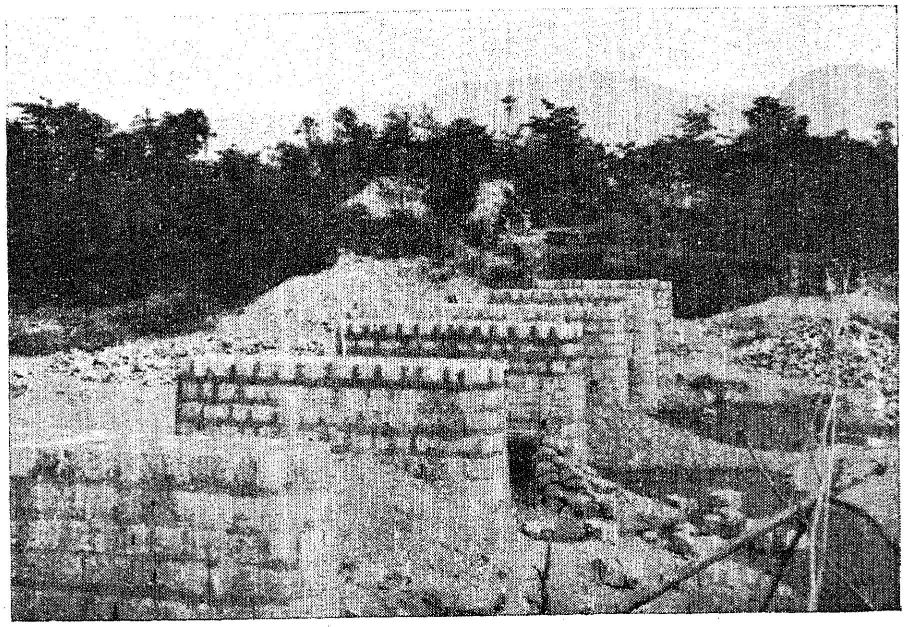
Mukkey Causeway.—Estimate Rs. 95,500. This is on the road connecting Palghat Town with Kadukkankunnam, Malampuzha and other hilly places beyond. This reduces the distance by 3 miles.



Walayar Causeway at Kanjikode.—Estimate Rs. 38,000. This is across Walayar River and on Kanjikode para road—connects Kanjikode with Elappully and Chittur.

Now, a few facts about the improvements in Palghat may be told. Katcha roads for a length of 209 miles have been formed by the people surrendering valuable lands as free gift and by putting in voluntary labour. Also, a total length of about 103 miles of roads have been metalled with 50 per cent contribution from the people. A number of major bridges and causeways and other works have been undertaken in the community project areas. These include not less than 24 bridges and causeways, 17 minor bridges and 5 foot bridges.

Progress of National Highway Programme



Bridge across Kannanorekadavu Thodu.—Estimate Rs. 43,000. This is on the road connecting Alathur with Kollengode.

The total cost of the National Highway programme for Madras State under the Second Plan, it is expected, would be about Rs. 4 crores, including schemes carried over from the First Plan. In financial terms, the total estimated cost of works sanctioned on National Highways in Madras during the First Plan was Rs. 2·66 crores, of which a sum of Rs. 1·34 crores is understood to have been spent by the end of that period.

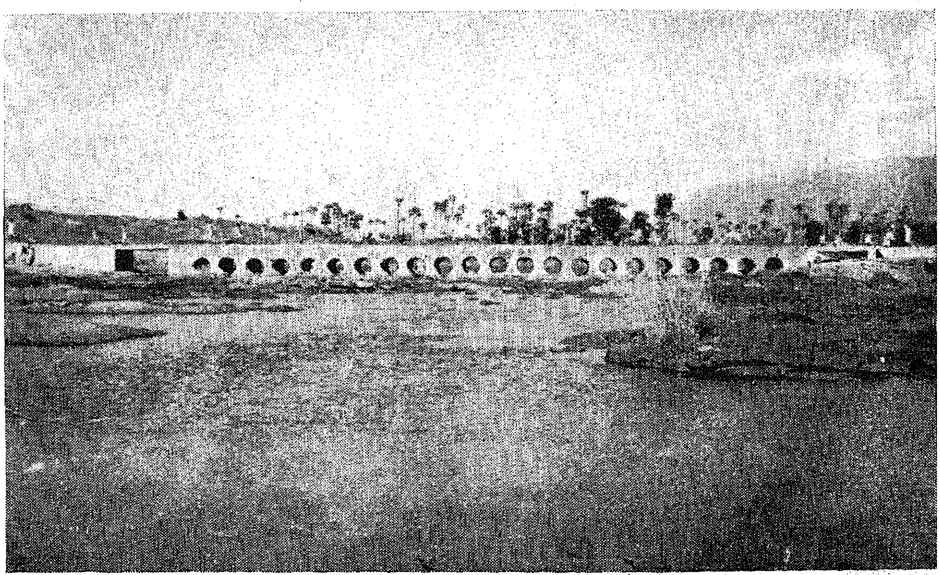
In respect of road development under the First Plan, the record of Madras was praiseworthy. Among the new schemes proposed were the reconstruction of the Gadilam bridge on the Madras-Thiruchirappalli-Dindigul road and the construction of a road bridge across the Pamban channel.

The entire National Highways system had been asphalted and a new road from Ramanathapuram to Mandapam, 23 miles long, had been built under particularly bad soil conditions. Further, the carriageway had been widened to make it suitable for two-lane traffic in a total length of about 75 miles. On the West Coast road, about 8 miles of missing links had been constructed and about 25 miles of existing roads improved.

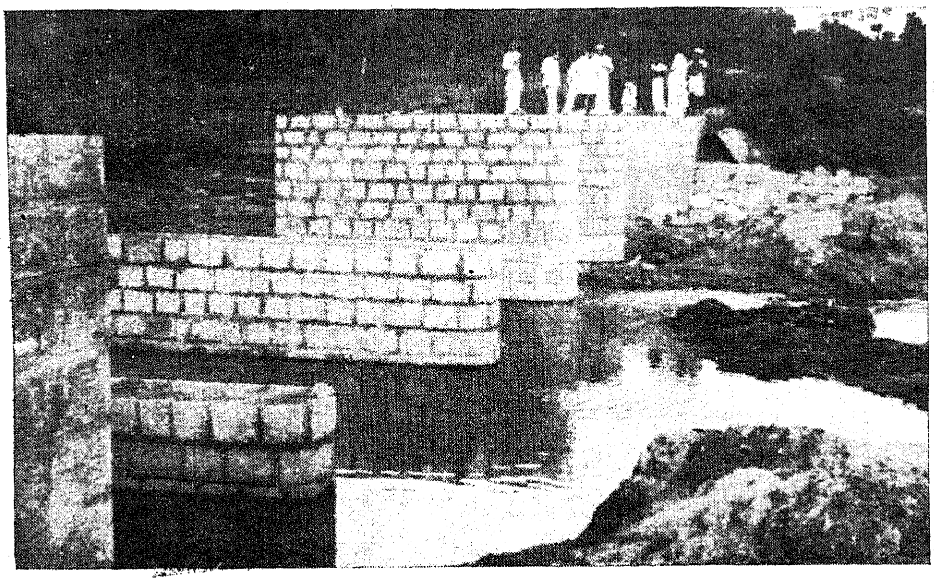
Under the Central Aid programme for the development of inter-State roads or roads of economic importance, 64 miles of existing roads in the State of Madras had been improved in the First Plan period.

At the end of the First Plan period, work was in progress, or was about to start, on the construction of bridges in the National Highways system across the Ponniyar, south of Villupuram, on the Madras-Trichy-Dindugul road ; the Palar, near Ranipet, on the Ranipet-Krishnagiri road ; and the Arjuna, Vaippar and Vaigai rivers on the Banaras-Cape Comorin road.

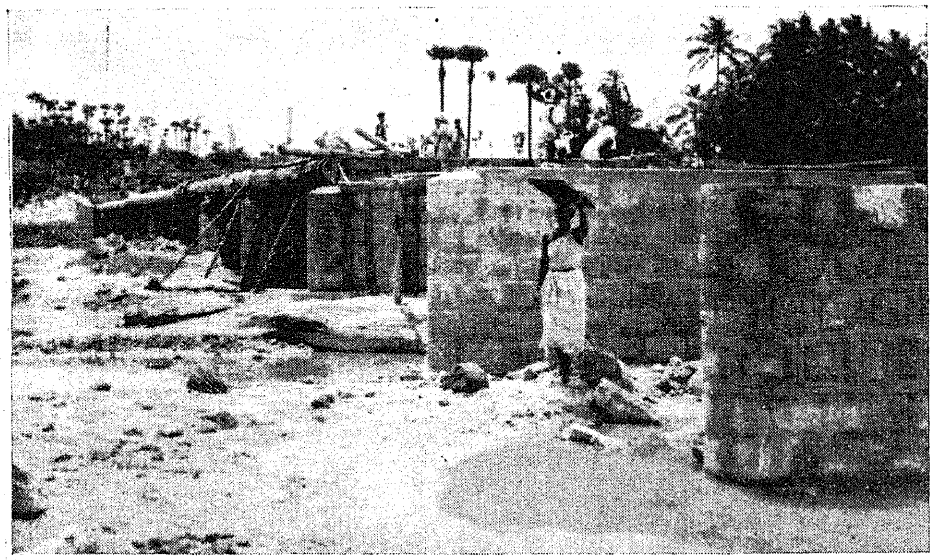
On the West Coast road, construction of bridges over the Nileswar, Perumbai, Puchumugar, Kariangode, Kuppam, and Kubja rivers and the improvement of about 200 miles of existing roads were in progress. Under the Central Aid scheme for roads of inter-State or economic importance, Government of India had sanctioned the construction of bridges, across the Pavanji, Mulki, and Udayavar rivers on the Mangalore-Udipi road and the Kannamangalam and Ponniar rivers on the Cuddalore-Chittoor road.



Chramangalam Causeway.—Estimate Rs. 36,600. This is on the newly formed 4½-mile length road connecting Kunisseri with Nemmara and reduces the distance by 5 miles.



Bridge across Kannanorepattola Thodu.—Estimate Rs. 23,700. This is on the newly formed 3-mile road connecting Pudukkode and Kannanorepattola (under construction).



Menonpara Causeway.—Estimate Rs. 34,500. This is on the newly formed 4½-mile length road connecting Elappulli with Menonpara and reduces the distance by 6 miles.

Work is also in progress on the construction of about 56 miles of new roads and the improvement of about 70 miles of existing roads under the same programme.

Among the other bridges built or strengthened in National Highways in Madras were the Noyyal bridge on the Salem-Cochin-Cape Comorin road and the Kodavanar and Kaveripatnam bridges on the Banaras-Cape Comorin road. On the West Coast road, the construction of a bridge across the Payaswami had been completed.

Facts and Figures

Oil reserves in Assam, which are being worked by the Assam Oil Company, are estimated at 18 million tons.

The output of iron-ore in India increased to 399,651 tons in March 1956 from 377,591 tons in the previous month.

The Integral Coach Factory at Perambur during the first year of its production ending October 1956, is expected to turn out twice its target of passenger coaches fixed for the year.

Rural Uplift in Nilgiris

In a report sent by the Block Development Officer, Ootacamund, he has furnished statistics of the progress made in his area during April 1956. These may be rapidly told. Fifty-five compost pits were dug during the month. One thousand seven hundred and ten pound of paddy seeds were distributed; also 200 lb. of ragi and 224 lb. of ammonium sulphate. Three demonstration plots were laid and 17 acres have been brought under vegetable cultivation. Five hundred and three fruit trees were planted while the other trees planted numbered 4,000. Cattle welfare also received attention. Four hundred and twenty-one cases were treated during the month. Propaganda was done about the usefulness of guinea grass. In the field of public health, sanitation campaigns were conducted during the month. Propaganda about the B.C.G. was also done. A road measuring 6 furlongs was laid out during the month. Three adult schools were organised, also 3 branch libraries. Two cottage industrial societies were formed. Four spinning classes were conducted. Loans to the tune of more than Rs. 12,000 were also disbursed.

Urban Family Welfare Project in Hyderabad

One hundred and eighty-two women workers belonging to low-income groups of families are employed in the factory and 117 women are given work at their homes in the match factory started under the Urban Family Welfare Scheme of the Central Social Welfare Board at Hyderabad. The factory is run under the auspices of the Asifnagar Family Welfare Co-operative Industrial Society, Ltd.

The Hyderabad factory started commercial production in December 1955 and the manufacture of match boxes during the period rose from 3,113 gross per month in January 1956 to 4,906 gross in the month of April 1956.

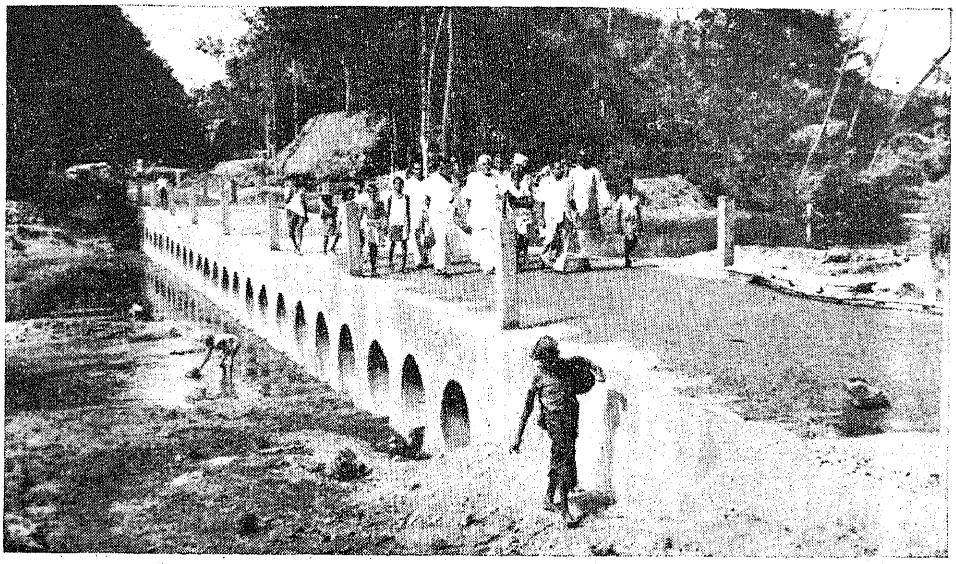
The Hyderabad match factory is the second project under the Urban Family Welfare Scheme to go into production, the first being the match factory started in New Delhi under the auspices of the Family Welfare Co-operative Industrial Society, Ltd.

Public Health Board

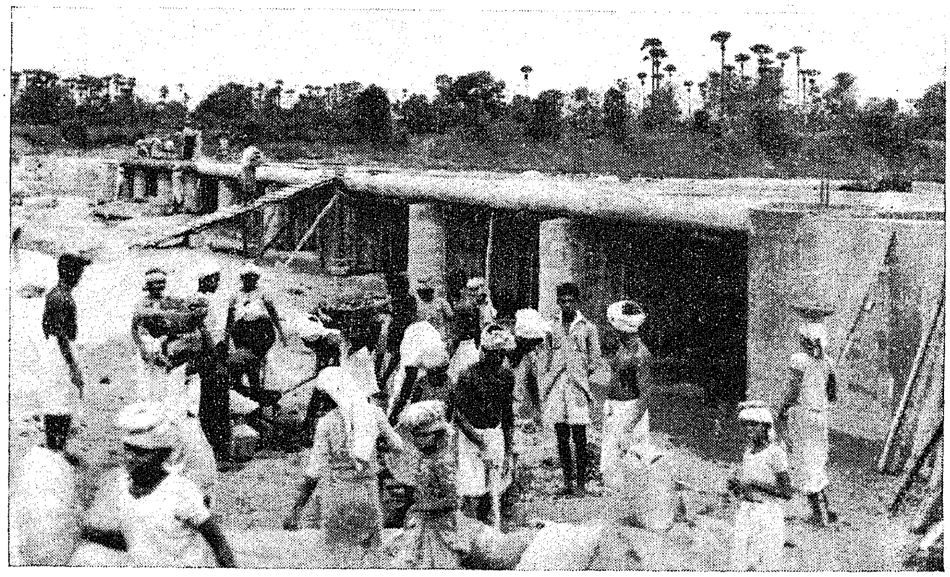
The Madras Public Health Board met in the Collector's Court Hall at Ootacamund on the 24th May 1956 at 3 p.m. The Minister for Health presided. A number of subjects of public health interest were discussed.

The Board again met on the 25th May 1956. Opportunity was taken to invite all the members of the Madras Legislature who were at Ootacamund at the time to attend the meeting. Dr. C. Gopalan, M.D., P.HD., Deputy Director of the Nutrition Research Laboratory at Coonoor, attended by special invitation, and gave a talk on two important aspects of nutritional deficiency in our State. He first mentioned the large extent to which protein malnutrition exists among children in our State. He described how symptoms of such protein malnutrition develop soon after the baby is weaned from breast feeding. He also described some experiments that have been conducted at the Nutrition Laboratories in Coonoor, with a view to supplying this sudden lack of proteins in the children after the weaning period. He said that skimmed milk powder is not made in India and is costly. So, he described a substitute protein food made at his laboratory, using roasted Bengalgram powder, a little of skimmed milk powder and jaggery, made in the shape of a small bolus, which can easily be swallowed by children. It has been found from trial on more than 100 patients, that this is almost as good as skim milk powder in preventing the symptoms of protein malnutrition and costs only about quarter as much. Dr. Gopalan further stated that it is proposed to conduct a larger pilot experiment with this protein substitute in Poonamallee and Madura areas with funds placed at their disposal by the W.H.O.

Dr. Gopalan next described the great extent to which symptoms of Vitamin 'A' deficiency are prevalent among children in the Madras State, and how Vitamin 'A' deficiency is one of the chief causes of preventible blindness among children. He stated that green leafy vegetables are a cheap source of Vitamin 'A' and suggested that special efforts should be made by the Administration to popularise the use of green leafy vegetables.



Alampallam Causeway.—Estimate Rs. 49,000. This is across Gayathri River connecting Vadavannur and Alampallam with Kollengode.



Parli Causeway.—Estimate Rs. 76,000. This is across Kannadi River and on Parli-Kottayi road. This is an important link connecting Alathur with Kanhikulam and effecting a saving of 14 miles.

Dr. Gopalan also demonstrated a number of interesting cases showing signs of protein and Vitamin 'A' deficiency, and also some cases showing results of appropriate treatment.

The Public Health Board also discussed the need to popularise the use of hand-pounded or parboiled rice, and suggested that more measures must be taken to educate the public on this subject. A demonstration of some of the different methods of hand-pounding has also been arranged.

Health Centre in Tellicherry

A primary health centre (hospital) has been started at Pinerayi in N.E.S. Block, Tellicherry, since 10th May 1956 and has begun to function. The Primary Health Centre Committee is making arrangements to start the construction of the buildings. Fifty per cent of the cost of the building will be met from the N.E.S. fund. The cost of the building will come to Rs. 50,000. This is the first primary health centre started in the N.E.S. area in Malabar.

7 - JUL 1956 MADRAS

Railways in India and Abroad—A Comparative study

SRI L. A. NATESAN, Economic Adviser, Ministry of Railways.

The Indian Railway system is the largest in Asia and the fourth largest in the world. It is also the world's second largest nationalised railway undertaking. Despite this leading position, India has much leeway to make up. What is the route mileage per 1,000 square miles and per 100,000 of population in India? How do travelling habits in India compare with those in foreign countries? Answers to this and other similar questions are provided in this article.

With a total route mileage of 34,705, the Indian Railways from the largest rail transport undertaking in Asia, and the fourth largest railway system in the world.

With only some 550 miles of narrow gauge lines worked by private companies, the system owned and operated directly by Government is the second largest among the nationalised railways in the world, the first being the U.S.S.R. Railways. Among the railway systems in Asia, the Indian Railways are also the largest, the Chinese and Japanese Railways following as the second and third in point of the route mileage.

The following table brings out a comparison of the railway system of India with certain other foreign railways :—

Route mileage of Indian and some Foreign Railways.

India	34,705
Japan	12,456
China (approximate)..	19,000
Burma	1,787
Pakistan	7,082
U.K.	19,151
Canada..	41,158
U.S.A.	224,816
South Africa (1953–54).	13,413
France	25,600
Australia (1953–54) ..	26,633

The comparatively leading position occupied by the Indian Railways should not obscure the fact that considering the area of the country and its population, the extent of railway development is low.

Low Railway Development

A glance at the railway map of the world suffices to indicate the extent of rail transport in the country and of the scope for further development in this regard. This is brought out even more clearly by a comparison with some of the advanced countries of the world. Expressed in relation to the area of the country, India has only 27 route miles per 1,000 square miles, as compared with 74 in U.S.A., 204 in the United Kingdom, 12 in Canada, 120 in France and 87 in Japan.

Yet another measure of judging the adequacy of the transport system is to express it in relation to the population of the country. The route mileage in India is only 9 per 100,000 of population while the corresponding figures are 138 for U.S.A., 37 for U.K., 272 for Canada, 60 for France and 14 for Japan.

In making a comparison of this kind allowance should, however, be made for the variations in the density of population from country to country, the vastness of the territory served and the extent of industrialization, the availability of alternative means of transport, etc.

High Passenger Usage

Considering the low ratio of mileage, the transportation work done by the Indian Railways, as measured by the passengers carried, passenger miles, freight tons moved and freight ton miles effected, does not, however, suffer by a comparison with the railways of other countries, as may be seen from the figures for 1954–55 presented in the following table.

	Passengers carried.	Passenger miles.	Tons carried.	Ton miles.
		(In thousands).		
India	1,300,224	38,649,312	115,117	27,018,637
U.K.	991,193	20,712,000	283,498	22,089,487
Canada	27,388	2,753,951	133,544	56,550,048
U.S.A.	439,356	29,286,008	2,297,996	549,258,800
France	500,300	16,509,801	166,528	25,404,036
Japan	3,546,995	51,919,012	147,152	24,717,872
South Africa	275,039	Not available.	62,445	15,234,600

An examination of the figures in the table would show that the only railway to record a higher figure under passenger traffic is the Japanese National Railway. The lower figures of U.S.A. and Canada are to be ascribed to the fact that the automobile accounts for the bulk of the passenger transportation in these countries.

The position in respect of freight transportation is somewhat different. The low figures of the tonnage carried on the Indian Railways as compared with the other railways, except those in South Africa, is indicative of the lag in the industrial development of the country.

Per Capita Rail Transport

The extent of improvement that one may look for in rail transport, both passenger and freight, in this country in the future may be indicated by a comparison with the statistics of certain other countries of the world.

From the figures summarised in the table on the next page, it would be seen that the rail journey per inhabitant

(*Per capita* 1954–55.)

	Passengers carried.	*Passenger miles.*	*Tons carried.*	*Ton miles.*
India	3·5	103	0·307	72
U.S.A.	2·7	180	14·149	3,382
U.K.	19·5	408	5·582	435
Canada	1·8	181	8·789	3,722
Japan*	40·9	599	1·697	285
France	11·7	385	3·887	593
South Africa*	20·9	Not available.	4·748	1,158

* Relates to 1953–54.

in India was 103 miles in a year, as against 408 in the U.K., 599 in Japan, 385 in France and 180 and 181 in U.S.A. and Canada respectively. On the goods side, Indian Railways handled per capita only 72 ton miles, against the high figure of 3,722 and 3,382 in Canada and U.S.A. respectively. The corresponding figures for U.K., France, Japan and South Africa are 435, 593, 285 and 1,158.

A study of these figures clearly indicates the leeway that has to be made up and the scope for further development.

Travel Habit

Another point worth considering here is the proportion of the per capita income spent on rail travel. The following table presents for the year 1953–54 a comparison of the per capita national income, per capita expenditure on rail passenger travel and the proportion which the latter bears to the former. For easier comparison, the respective national currencies have been converted into their equivalent Indian rupee value at the prevailing official rates of exchange.

Countries.	*Per capita national income.*	*Per capita expenditure on rail travel.*	*Percentage of col.* (3) *to col.* (2).
	RS.	RS.	
Australia	4,373	49	1·1
Canada	6,238	27	0·4
France	3,323	40	1·2
India	284	3	1·1
Italy	1,421	15	1·1
Japan	910	18	2·0
South Africa* ..	1,293	16	1·2
U.K.	3,880	30	0·8
U.S.A.	9,100	25	0·3

* 1952–53.

From an examination of the above figures it is quite clear that the propensity to spend on rail travel of an average person in India is not any less than that of his counterpart in other countries. The proportion spent on rail travel in India, namely 1·1 per cent of the per capita national income, compares quite favourably with that in most of the other countries, the only country to record a higher figure being Japan. If we take into account the low figure of per capita national income in India, the intensity of the desire for travel in India should be deemed to be much more than is reflected by the proportion spent on rail travel. This again should be sufficient to indicate the scope for further increases in the expenditure on passenger travel with a rise in the national income.

Per Capita Employee Output

Another interesting basis of comparison is the employee ratio, in regard to transportation output, There is no suitable common unit in which one may express the transportation handled in respect of passengers and goods. But for purposes of a general comparison, the number of passengers, passenger miles, tons and ton miles may be expressed as averages per employee.

The output per employee of rail transportation thus expressed for Indian Railways and for certainforeign railways for 1954–55 may be seen in the table on the next page. The averages show that with the exception of Japan, the output per worker, as measured by the number of passengers carried per employee and passenger miles per employee on the Indian Railways, compares quite favourably with the ratios of the foreign railways. The same claim cannot be made in respect of goods traffic and the position here is that the Indian figure is the lowest of all the countries both in respect of the average tonnage and ton miles.

Lowest Capital Investment Ratio

It should, however, be noted here that the productivity of a worker is also determined by the extent of capital equipment provided to aid him in his work. This is generally brought out by the average investment made in an industry per employee. The more elaborate and technically more efficient the tool, the greater the efficiency of the worker and his production per man-hour.

The ratio of capital investment affords an important clue to the index of productivity of labour and of the standard of the technique in the industry. Disparities in the employee averages of capital investment may be seen from the following table for 1954–55. It should be added that these figur are likely to be affected by past financi policies, over-capitalization, reorganiz tion, writing-off of dead investmen etc., so that only a broad and gener comparison can be made of these stat tics. But the averages do convey idea as to one reason at least why t output in terms of freight traffic mov per employee is so low.

Country.	*Capital at cl per emplo in rupees*
India	9,0
U.K.	35,0
U.S.A.	1,45,5
Canada—National Railway.	1,11,7
Pacific Railway.	95,4
South Africa (1953–54).	24,1

Volume of transportation work done per employee in India and certain foreign railways (1954–55).

	Passengers carried per employee.	*Passenger miles per employee.*	*Tons carried per employee.*	*Ton miles per employee.*
India	1,342	39,882	119	27,880
U.S.A.	413	27,506	2,158	515,878
U.K.	1,717	35,885	491	38,271
Canada—				
National Railway ..	150	12,373	667	276,435
Pacific Railway ..	109	14,726	623	271,824
Japan*	7,938	116,192	329	55,317
France	1,290	42,566	429	65,498
South Africa*	1,409	N.A.	320	78,040

N.A.=Not available.

* 1953–54.

The figure of capital-at-charge per employee is the lowest on the Indian Railways. Railway operation by its very nature is capital intensive rather than labour-intensive. The figures appear to suggest that the Indian Railways may at the present stage of development profit substantially from a rise in capital investment per employee.

Appointments under Madras Government

The Government have directed that in the case of applications for posts to which recruitment is not made by the Madras Public Service Commission, copies of certificates certified as correct by retired officials of Government, doctors and headmasters of high schools be accepted, provided that in the case of retired officials of Government, the certifying person is a retired Gazetted Officer.

The acceptance of certified copies of documents will, however, be subject to the condition that the production of original certificates is insisted upon by the appointing authorities before appointments are actually made.

Cattle Fair

Under the cattle rehabilitation scheme in the cyclone-affected areas of Tanjore, Ramanathapuram, Madurai and Tiruchirappalli districts, prizes were awarded to the first three largest cattle (work bullock) sellers at the cattle fair held recently at Neerathanallur near Kumbakonam. Cash prizes to the value of Rs. 300, 200 and 100 were awarded by the Revenue Divisional Officer, Kumbakonam.

Similar prizes were also awarded at Kalugumalai cattle fair for the first three largest sellers of cattle.

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DASS/11

7 - JUL 1956

A.I.R. Tiruchi : Rural Programmes for July 1956

Sunday, 1st July 1956—

Plant Pests : Discussion.

Grama Kalakshepa Mandapathil : Yesunathar : Musical discourse by P. K. Sundaram Pillai.

Market rates and water level readings.

Topical discussion ; weather report.

Monday, 2nd July 1956—

Hemorrhagic septicæmia in cattle : Discussion.

Folk Art : Kuravan Kurathi Tharkkam.

Market rates ; water-level readings.

Topical discussion ; weather report.

Tuesday, 3rd July 1956—

Farm Forum : Discussion : Participant : P. Srinivasan.

Folk songs.

Pookkara Ponnan (1) Ponnan Puka Pukazh—Serial sketch by 'Sukhi'.

Market rates and water-level readings.

Topical discussion ; weather report.

Wednesday, 4th July 1956—

Leprosy ; Discussion.

Naiyandi Melam by M. V. Azhagu and Party.

The latest in research : Discussion on subjects of interest and use to farmers.

Market rates and water-level readings.

Topical discussion ; weather report.

Thursday, 5th July 1956—

Farm Forum : Discussion.

Folk Ballad (1) Kathavarayan Kadai.

Market rates and water-level readings.

Topical discussion ; weather report.

Friday, 6th July 1956—

Ani Alangaram (1) Kai Valayil—Musical feature.

The Village Welfare Association : Discussion : Participant : K. S. Vasan.

Grama Padasalaiyil (4) Naaladiar—Exposition.

Market rates and water-level readings.

Topical discussion ; weather report.

Saturday, 7th July 1956—

Kaniyudirum Solai : Song.

The Adult Literacy Class : Tirukkural : Tivinai Acham (Kural Nos. 203 and 204).

Nermai Onre : Song.

'Improved Methods of ground-nut cultivation' : Talk in Tamil arranged by the Department of Agriculture, Government of Madras.

Weekly review of market rates.

Market rates and water-level readings.

Topical discussion ; Weather report.

Sunday, 8th July 1956—

Potato : Imporved method of cultivation : Discussion.

Varna Mettu : Folk tunes.

Gramathu Machan : Serial sketch.

Market rates and water-level readings.

Topical discussion ; weather report.

Monday, 9th July 1956—

Poultry diseases : Discussion.

Folk Art : Dummy Horse Dance : Participants : S. Govindaswamy and Party, T. P. Muniswamy and V. Sellamuthu.

Market rates and water-level readings.

Topical discussion ; weather report.

Tuesday, 10th July 1956—

Farm Forum : Discussion : Participant : T. P. Venkataraman.

Gnana Chuvadi : Isai Nigazchi.

Ullasa Yattirai : Play.

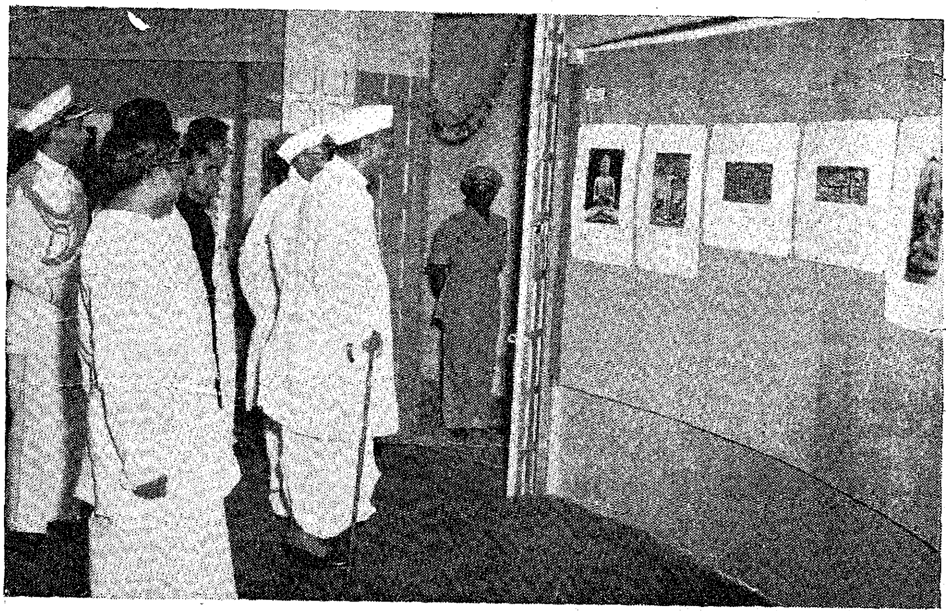
Market rates and water-level readings.

Topical discussion ; weather report.

Wednesday, 11th July 1956—

Listeners' Letters.

Poocharam : Songs on Lord Buddha.



The President, Dr. Rajendra Prasad, performed the opening ceremony of the Buddha Jayanti Exhibition at the Centenary Hall, Government Museum, Madras, on May 27. Picture shows the President being conducted round the Exhibition at Madras after its formal inauguration.

Pulluruvi (1) Somberi : Sketch.
Market rates and water-level readings.
Topical discussion ; weather report.

Thursday, 12th July 1956—
Farm Forum : Discussion—Participant : A. Palaniyandi.
Folk Ballad : Nalla Thangai.
Market rates and water-level readings.
Topical discussion ; weather report.

Friday, 13th July 1956—
Panankattu Nari : Play by K. P. Ganapathi.
Irulil Oli : Serial feature on Gandhiji's life.
Namadu Dittam : Cattle wealth : Discussion.
Market rates and water-level readings.
Topical discussion ; weather report.

Saturday, 14th July 1956—
Kummiyadi Tamizhnadu : Song.
The Adult Literacy Class : Tirukkural : Tivinai Acham : (Kural Nos. 205 and 206).
Vayudeva Varunadeva : Song.
Radio Interview : Palm-gur manufacturer.
Weekly review of market rates.
Market rates and water-level readings.
Topical discussion ; weather report.

Sunday, 15th July 1956—
Kashmir : Agriculture : Discussion.
Varna Mettu : Folk tunes.
Ezhuthukkara Ekambaram : Serial Sketch.
Market rates and water-level readings.
Topical discussion ; weather report.

Monday, 16th July 1956—
Black-quarter in cattle : Discussion.
Folk art : Lavani : Participants : Raman and Lakshmanan.
Market rates and water-level readings.
Topical discussion ; weather report.

Tuesday, 17th July 1956—
Farm Forum : Discussion.
Folk songs.
Pookara Ponnan (2) Poonthottathil : Sketch.
Market rates and water-level readings.
Topical discussion ; weather report.

Wednesday, 18th July 1956—
Tuberculosis : Discussion.
Udukkadi Kadai.
India Pattai Kettanaya?
Market rates and water-level readings.
Topical discussion ; weather report.

Thursday, 19th July 1956—
Farm Forum : Discussion.
Punitha Yattirai : Feature by A. M. Yousuf.
Tudippadalgal.
Market rates and water-level readings.
Topical discussion ; weather report.

Friday, 20th July 1956—
Folk song Lesson.
The Village Women's Forum : Discussion.
Thalattupadalgal.
Pattai Kelurgal.
Market rates and water-level readings.
Topical discussion ; weather report.

Saturday, 21st July 1956—
Senkadir Venmai : Song.
The Adult Literacy Class : Tirukkur[illegible]inai Acham (Kural Nos. [illegible] 208).
Inikkum Karumbu : Song.
Talk in Tamil arranged by the Director of Agriculture, Government of Madras, Madras.
Weekly review of market rates.
Market rates and water-level readings.
Topical discussion ; weather report.

Sunday, 22nd July 1956—
New Method of cultivating groundnut : Discussion.
Grama Siruvargal : Feature on Five-Year Plan : Participants. Students of Zamindar's High School, Turaiyur.
Market rates and water-level readings.
Topical discussion ; weather report.

Monday, 23rd July 1956—
Sterility in cows.
Folk Art : Karaha Attam : Participant : T. K. Marimuthu and Party.
Market rates and water-level readings.
Topical discussion : weather report.

Tuesday, 24th July 1956—
Farm Forum : Discussion.
Gnana Chuvadi : Isai Nigazhchi.
Kodai Vallal : Play by N. Raghavan.
Market rates and water -level readings.
Topical discussion : weather report.

Wednesday, 25th July 1956—
Listeners' Letters.
Poocharam : Songs on Lord Buddha.
Questions on the Air : Discussion on subjects of rural interest specially those relating to agriculture : Participants : R. Vinayakam Pillai and A. Vedaratnam Pillai.
Market rates and water-level readings.
Topical discussion ; weather report.

Thursday, 26th July 1956—
Farm Forum : Discussion.
Folk Ballad : Mathurai Veeran.
Market rates and water-level readings.
Topical discussion ; weather report.

Friday, 27th July 1956—
Eriya Natchatiram : Play by R. Arumugham.
Irulil Oli : Serial feature on Gandhiji's life.
Namadu Dittam : (2) Cottage Industries : Discussion.
Market rates and water-level readings.
Topical discussion ; weather report.

Saturday, 28th July 1956—
Anbin Ellaiyai : Song.
The Adult Literacy Class : Tirukkural : Tivinai Acham (Kural Nos. 209 and 210).
Inbathamizh Mozhi : Song.
Radio Interview : Fisherman : Bhetti.
Weekly review of market rates.
Market rates and water-level readings.
Topical discussion ; weather report.

Sunday, 29th July 1956—
Grama Panchayat : Madu Meitha Vazhakku : Feature by N. Vasudev.
Varna Mettu : Folk tunes.
Market rates and water level readings.
Topical discussion : weather report.

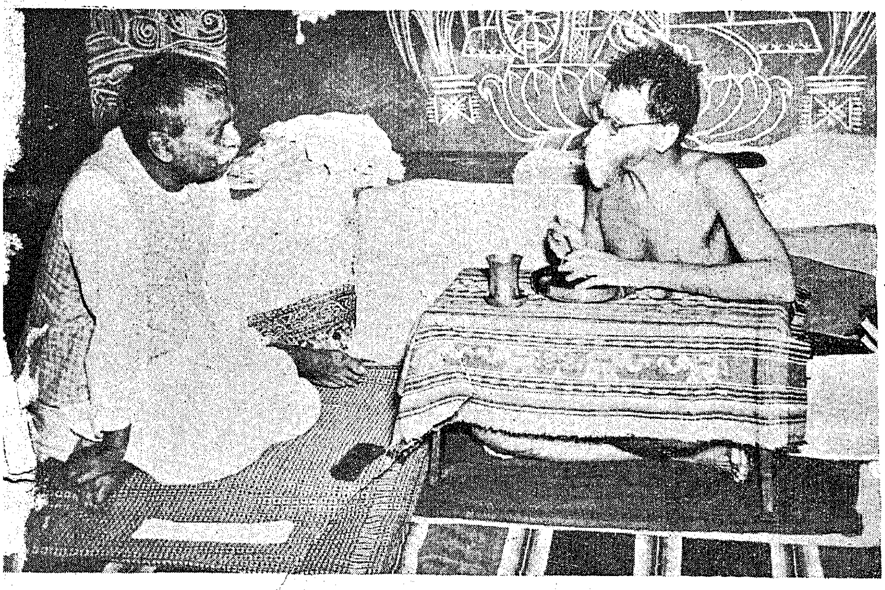
Monday, 30th July 1956—
Paralysis in calves : Discussion.
Folk art : Villippattu on Onre Kulam.
Market rates and water-level readings.
Topical discussion ; weather report.

Tuesday, 31st July 1956—
Farm Forum : Discussion : Participant : P. Palaniappan.
Folk Songs.
Pookkara Ponnan (3) Kovilukkul Ponnan : Serial sketch by 'Sukhi '.
Market rates and water-level readings.
Topical discussion : weather report.

SCENES AT SARVODAYAPU

7 - JUL 1956
MADRAS

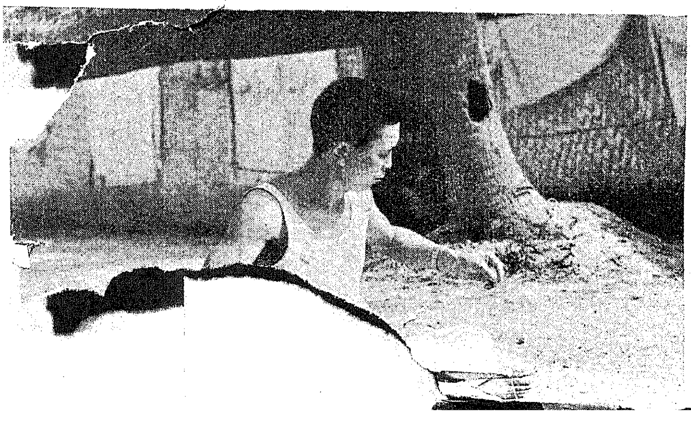
The Congress President and the Chief Minister at the Sarvodaya Camp.



Acharya Vinoba Bhave comm
prayer as a preliminary to his :

The Acharya and the Presid
former's hut.

These two disciples of Acharya
hailing from Japan and the
America are engaged in t
spinning and sweeping. T'
earnestly practising the
principle—the dignity an
manual labour.



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